

# Norwegian School of Economics Bergen - Spring Semester 2015

# The Expansion of Low Cost Carriers into the Long-Haul Market: A Strategic Analysis of Norwegian Air Shuttle ASA

1111111

Master in International Business

Submitted by: Long Chen (S135623) Hubert Pawlikowski (S135618)

Supervisor: Stig Tenold

Page Count: 98 Words: 39441

This thesis was written as a part of the master programme at NHH. The institution, the supervisor, or the examiner are not - through the approval of this thesis - responsible for the theories and methods used, or results and conclusions drawn in this work.

#### Executive Summary

The low-cost carrier ("LCC") business model has been in existence for several decades and their market share has been growing steadily. However, the most successful LCCs such as Southwest, Ryanair and EasyJet have focused upon implementing the low-cost strategy on short-haul routes. The main strategic objective of this thesis is to identify the underlying reasons for this phenomenon and whether there is a potential for the exploitation of the low-cost business model on long-haul flights. With this objective in mind, we conducted a case study of Norwegian Air Shuttle ASA ("NAS"), a LCC originating from Norway, and the only LCC currently operating long-haul routes from Europe to North America and Asia.

The thesis is structured around three main parts; Literature Review, External Analysis and Internal Analysis. The Literature Review provides the theoretical background. The External Analysis chapter is split in two. Firstly, we use the PESTLE model to identify the major macroeconomic factors directly influencing the airline industry. Then we move to the microenvironment analysis that utilises the Porter's Five Forces framework to provide a summary of the key issues shaping industry profitability. The third part, Internal Analysis provides an overview of the company's history, financial performance and operational strategies in its long-haul expansion. The Chapter ends with a SWOT analysis to distinguish the key strengths, weaknesses, opportunities and threats facing NAS. Ultimately, the VRIO analysis finds that NAS currently lacks the resources to create and maintain sustainable competitive advantages in the long-haul market.

In fact, the company has even failed to gain a significant price advantage over its competitors, especially when its LowFare+ product is compared with the fares of legacy airlines offering indirect services. As such, we conclude the thesis with a Recommendations section, where we propose several strategic solutions that may improve NAS' financial and operational performance on its long-haul routes.

## Acknowledgements

We have completed this thesis with the assistance of many people. In particular, our supervisor, Stig Tenold, was an important mentor for us and we would like to thank him for his patience and guidance throughout the whole process. In addition, our family and friends have also contributed in their own way, and we would not be where we are today without their encouragement and support.

Before continuing further, it should be noted that we have no relevant experience working in the airline industry nor do we have any personal contacts with anyone in the industry. The thesis topic was motivated by NAS' decision to tackle the long-haul market in 2013 with flights from Stockholm and Oslo to New York and Bangkok. Our interest in the industry stems purely from an interest in travel and a desire to develop a deeper understanding into how the airline industry operates, particularly in relation to LCCs. We hope to use the knowledge that we have gained during the course of our undergraduate and Masters Degrees, specifically in the areas of finance, strategy and corporate governance, to analyse the issues from a fresh and thorough perspective.

## Abbreviations

**ASK** Available Seat Kilometres

**ASEAN** Association of Southeast Asian Nations

**BA** British Airways

**CASK** Cost per available seat kilometre

**CWC** Carrier-within-carrier

**EBIT** Earnings before Interest and Tax

ETS Emissions Trading Scheme

EU European Union

FFP Frequent Flyer Program

**GDP** Gross Domestic Product

**HSR** High-Speed Rail

IATA International Air Transportation Association

ICT Information Communication Technology

LCC Low Cost Carrier

**NAS** Norwegian Air Shuttle ASA

**NOK** Norwegian Kroners

RASK Revenue per available seat kilometre

ROIC Return on Invested Capital

**RPK** Revenue Passenger Kilometres

**SAS** Scandinavian Airlines

**Aircraft Utilization:** the number of hours within a day that an aircraft is actually being used for flight operations.

**Bargaining Power:** the ability to extract favourable outcomes from negotiations due to one party's strengths and superior position.

**Bilateral Agreements:** treaties between two sovereign governments which set out the rules under which international commercial airline services shall operate.

**Biofuels**: any form of renewable energy that can be derived from biomass such as plants and algae.

**Cabotage**: the carriage of air traffic that originates and terminates within the boundaries of a given country by an airline that is licensed in another country.

**Code-Sharing Agreements:** a type of enhanced marketing agreement allowing one airline to sell a seat on a flight operated by another airline.

**Deregulation:** process whereby regulatory controls over entry, capacity and pricing are removed.

**Economies of Density**: economies gained as the number of flights on a particular route increases due to the fact that fixed costs such as fuel, cabin crew and aircraft servicing are higher than traffic sensitive costs such as food and ticket handling.

**Economies of Scale**: the benefits enjoyed by larger firms in the form of lower per unit costs due to their ability to spread fixed costs over more production units and their stronger bargaining position.

**High Speed Rail**: trains that are capable of travelling at much faster speeds than traditional railways, often exceeding 250km/hr.

**Hub:** an airport that airlines use as an important transfer point in their route networks to transport passengers to their final destination.

**Interline Agreement**: voluntary agreement between airlines allowing passengers to buy a single ticket for an itinerary on multiple airlines.

**Income Elasticity**: measures the sensitivity of demand for a good to changes in individual or aggregate income levels.

**Legacy Carriers**: airlines that have been in existence prior to deregulation and generally provides a full-service product offering to their customers.

**Load Factor:** the amount of seats on any given flight that is actually sold to consumers.

Long Haul Routes: flights that are longer than 6 hours of flying time.

**Low-Cost Carriers**: airlines that utilise a business model that is focused on maximising operational efficiency through direct flights, high aircraft utilisation and secondary airports so that they can achieve cost leadership and offer the lowest fares to their customers.

**Price Discrimination**: a technical economic term that describes situation when firms charge customers different prices based upon their willingness to pay. An example in the airline industry is that different prices are paid by economy, business and first class passengers.

**Price Elasticity**: a measure used to capture the sensitivity of consumer demand for a good or service in response to changes in the price of that particular good or service.

**Return on Invested Capital**: the after-tax operating profit, adjusted for operating leases, expressed as a percentage of invested capital.

**Short-Haul Routes**: flights that are shorter than 2 hours of flying time.

**Single Class Cabin**: A form of aircraft configuration whereby there is only one, uniform seat option available for customers.

**Strategic Alliance**: a long-term partnership between two or more firms who attempt to improve their collective competitive advantages by sharing and pooling scarce resources such as brand assets and market access capability.

**Substitute**: a product or service that performs the same or similar function through different means.

**Sustainable Competitive Advantage**: if a firm is capable of generating profits that exceed the average profitability within the industry for a prolonged period of time.

**Switching Costs**: the costs associated with changing from one firm to another.

Turnaround Times: the length of time that it takes for an aircraft to take-off again after landing.

**Unbundling:** process whereby the airline product offering is stripped down into individual components. The actual fare paid is for the seat itself, with no extras on-board such as free food, drinks and newspapers. These extra services are available for an additional fee.

**Unitary Board**: a type of Board structure whereby the company has only one Board of Directors, consisting of both executive and non-executive directors and they make decisions as a unified group.

# List of Tables and Figures

Figure 1: World's Busiest Airlines	3
Figure 2: Overview of Thesis Structure	6
Figure 3: Literature Review	12
Figure 4: External Analysis	19
Figure 5: PESTLE Framework	20
Figure 6: PESTLE Summary	30
Figure 7: Porter's Five Forces Framework	31
Figure 8: Porter's Five Forces Summary	39
Figure 9: Internal Analysis	40
Figure 10: NAS Corporate Structure	44
Figure 11: Share Ownership by Country	45
Figure 12: NAS Shareholder Distribution	45
Figure 13: Timeline of Major Developments in History of NAS	47
Figure 14: Summary of Operating Revenues and Expenses (2010-2014)	48
Figure 15: Equity Ratios for Sample Airlines (2010-2014)	50
Figure 16: Current Ratios for Sample Airlines (2010-2014)	51
Figure 17: Net Profit Margin for Sample Airlines (2010-2014)	52
Figure 18: Available Seat Kilometres for Sample Airlines (2010-2014)	53
Figure 19: Revenue Passenger Kilometres for Sample Airlines (2010-2014)	54
Figure 20: Load Factor for Sample Airlines (2010-2014)	55
Figure 21: Yield for Sample Airlines (2012-2014)	56
Figure 22: CASK and RASK for Sample Airlines (2013-2014)	56
Figure 23: SWOT Analysis Summary	82
Figure 24: Key Resources and Capabilities	85
Figure 25: Recommendations	89
Figure 26: Spectrum of Airline Cooperation	92

Table 1: Key Differences between LCCs, Legacy Carriers, and Low-Cost Long-Haul	18
Table 2: Fleet of NAS	42
Table 3: NAS Financial Performance (2010-2014)	47
Table 4: Overview of Peer Group	49
Table 5: Foreign Exchange Conversion Rates (2010-2014)	50
Table 6: NAS Economy and Premium Class Product Offerings	62
Table 7: London – New York Premium and Business Class Fares	63
Table 8: London – Los Angeles Premium and Business Class Fares	63
Table 9: Oslo – New York Premium and Business Class Fares	63
Table 10: Oslo – Bangkok Price Comparison	64
Table 11: London – New York Price Comparison	65
Table 12: Oslo – New York Price Comparison	65
Table 13: Key Differences between NAS Short-Haul and Long-Haul	67
Table 14: VRIO Framework: Competitive Implications & Firm Performance	83
Table 15: VRIO Analysis for NAS Short-Haul	86
Table 16: VRIO Analysis for NAS Long-Haul	88

# Table of Contents

Ex	Executive Summary				
Ac	Acknowledgements				
Ab	Abbreviationsiii				
De	finition	18	iv		
List of Tables and Figuresv					
1.	Intro	oduction	1		
	1.1.	Rise of Low-Cost Carriers	1		
	1.2.	Background of Low-Cost Long-Haul	3		
	1.3.	Research Focus	4		
	1.4.	Thesis Structure	5		
2.	Meth	nodology	6		
	2.1.	Research Approach	6		
	2.2.	Research Design	7		
	2.3.	Validity	10		
3.	Liter	ature review	11		
	3.1.	Single Class Cabin	12		
	3.2.	Secondary Airports	13		
	3.3.	Faster Turnarounds	14		
	3.4.	Point-to-Point Flights	14		
	3.5.	Unbundling the Product Package	15		
	3.6.	Cargo	16		
	3.7.	Stimulating Demand	17		
	3.8.	Summary	17		
4.	Exte	rnal Analysis	18		
	4.1.	PESTLE Analysis	19		
	4.2.	Porter's Five Forces	30		

5.	Internal Analysis of Norwegian Air Shuttle ASA		40
	5.1.	Airline History / Overview	41
	5.2.	Financial Analysis	47
	5.3.	Key Operational Issues	58
	5.4.	SWOT Analysis	68
	5.5.	VRIO Analysis	83
6.	Reco	ommendations	89
	6.1.	Focus on Underserved Routes	89
	6.2.	Upgrade the Business Class Cabin	90
	6.3.	LCC Alliances	91
	6.4.	Marketing Strategies	92
	6.5.	Anticipate New Rivals	93
	6.6.	Grow Revenues and Profits Concurrently	93
	6.7.	Controlled Expansion	94
	6.8.	Leadership	94
	6.9.	Summary	94
7.	Conc	clusion	95
	7.1.	Implications	97
8.	Refe	rences	99

#### 1. Introduction

2014 was a landmark year in aviation history, marking the centenary of the first commercial flight operations. During that year, the industry collectively generated revenues in excess of \$750 billion and transported 3.3 billion passengers on over 33 million flights to all parts of the globe (IATA, 2014a; p1). In addition, the industry is one of the largest employers, supporting almost 60 million jobs globally (Tyler, 2014; p17).

These figures reflect the significant role that the industry has played in bringing the world closer together. Air connectivity has been an indispensable component of the globalisation process as it has helped to facilitate the movement of goods, people, ideas and technology across the globe, and to ensure that resources will be allocated to the areas where they can yield the highest levels of productivity (Taneja, 2008a).

Button and Pels (2010; p85) estimated that the aviation industry accounts for approximately 1% of GDP in both the EU and the U.S. and is responsible for transporting about 40% of the international trade by value. In nominal terms, the value of trade carried was \$6.8 trillion in 2014 (IATA, 2014b; p6). Despite its obvious size and importance, the industry has been a perpetually low-margin business, which has been outperformed by almost all other industries. The net post-tax profit of the whole industry has averaged 0.1% of revenues over the last 40 years (IATA, 2011a; p2). This lack of profitability is attributable to factors such as poor industry structure, ill-advised government intervention and incoherent strategies decisions (IATA, 2011a).

## 1.1. Rise of Low-Cost Carriers

Before 1978, there was little room for new airlines to enter the market because the industry was highly regulated. New entrants were restricted by national licensing policies and the ability of airlines to grow was constrained by the fact that routes were fixed and fares were structured by the government (Williams, 2002). Most countries had a flag carrier, which enjoyed subsidies and preferential treatment in terms of market access.

Such a high level of government intervention caused pervasive inefficiencies throughout the industry, especially in terms of its adverse impact on market access, service frequencies, pricing freedom, route networks and industry capacity (Doganis, 2010). The end result was that air travellers were denied the benefits inherent in a competitive market.

The process of deregulating the industry began in earnest in the late 1970's in the U.S. After deregulation, there was a flood of new airlines entering the industry, attracted by the allure of aviation and the promise of higher profit margins in the deregulated market (Wu, 2012). However, the large capital requirements, fluctuating demand and intense competition meant that very few of

those new entrants were able to gain a foothold in the market. In the period between 1978 and 1989, Gudmundsson (1998) estimated that 88 carriers were formed in the U.S., of which 83 failed.

One of the survivors from that period in aviation history was Southwest Airlines. When describing the history of the company, Gittell (2005) stated that one key reason for its growth was the ability to offer low fares capable of competing with the cost of travelling by car or bus, rather than simply competing with other airlines for market share. It was the first airline to successfully tap into the demand for low-fare, but reliable travel. The three key components of the Southwest model as outlined by Gittell (2005) were the simplicity of the product offered, the point-to-point network structure serviced by a single type of aircraft and the relationship component, which provided the company with distinct organisation practices, setting it apart from its competitors. As a consequence, it was able to enjoy sustained and controlled growth in revenues of between 10% and 15% on an annual basis (Gittell, 2005). Southwest's success has been imitated by other LCCs such as JetBlue, Spirit Airways and AirTran. In 2013, these four LCCs had a combined market share of almost 23% in the domestic U.S. market (CAPA, 2013a).

European deregulation lagged behind the U.S. and other countries due to its highly political nature and the fact that member states wanted to safeguard the interest of their national airlines (Dipendra, 2001). It was not until the mid-1980's that the deregulation process gained momentum. Despite the late start, the EU became the world's first fully deregulated region in 1997 when a single aviation market was established (Mojsoski, 2014).

Following the pattern of what had occurred in the U.S. two decades earlier, a wave of new airlines entered the European market once they were provided with the freedom to determine their own capacity, routes, fares and schedules. The impact of the low-cost revolution has been even more pronounced in Europe than in the U.S. In 2013, IATA released a list of the top 100 Airlines by passenger traffic. Ryanair and EasyJet were ranked first and second on this list, with passenger numbers of 81.3 million and 52.7 million respectively (see Figure 1). Two other European LCCs, Norwegian Air Shuttle ("NAS") and Wizzair also made the top-25. Nevertheless, the attrition rate is still very high for LCCs as Budd et al. (2014; p79) found that, of the 43 new LCCs introduced into the European market between 1992 and 2012, only 10 are still operational. This represents an attrition rate of 77%.

The market penetration of LCCs has been most profound in Southeast Asia, where LCCs have a market share 53%, more than double the global market share of 26% (Boeing, 2015; p7). However, in regions such as Africa, China and the ex-Soviet countries, there is huge untapped potential as the penetration of LCCs is still below 10% (Boeing, 2015; p7).

**World's Busiest Airlines (2013)** China Airlines Air Canada Wizzair Norwegian SAS **QANTAS SWISS** Thai Airways Korean Air Singapore **Qatar Airways LAN Airlines** Cathay Pacific American Air Berlin Delta Air Lines **United Airlines** KLM **Turkish Airlines** Air France **British Airways Emirates** Lufthansa EasyJet Rvanair 0 10 20 30 40 50 60 70 80 90 **Number of Passengers (Millions)** 

Figure 1: World's Busiest Airlines

Source: Own Creation, based on data from Ryanair (2014)

## 1.2. Background of Low-Cost Long-Haul

Despite the prevalence of LCCs in international aviation today, their success has been primarily constrained within the short-haul market. With the European short-haul market maturing, LCCs are increasingly investigating the possibility of commencing long-haul operations as a new source of profit (Tafur et al., 2008; Dennis, 2004a; Woodman, 2014). As Wensveen and Leick (2009) recognised, the airline industry is in a constant state of flux, fluctuating between periods of survival, adaptation, recovery and innovation. Therefore, it is imperative that LCCs adopt flexible business strategies in order to be able to adapt to changing business conditions.

However, doubts exist whether the same cost advantage LCCs have enjoyed in short-haul markets is attainable when operating long-haul. Historically, shorter routes have offered much greater potential to achieve cost competitiveness over legacy airlines. As a result of the higher costs, LCCs have experienced difficulties in generating profitable margins on long-haul flights while still offering low fares.

O'Connell (2007; p108) calculated that, in short-haul markets, LCCs have been able to provide 80% of the service quality at less than 50% of the cost. However, Van Der Brugge (2008; p56)

estimated that LCCs will only be able to achieve savings of between 20% and 25% in the long-haul market. The additional costs associated with long-haul operations include catering services, additional fuel, overnight accommodation for crew, and compensation for passengers suffering from delayed flights due to technical or operational problems. In the first quarter of 2014, these additional costs amounted to 78 million NOK for NAS (4-Traders, 2014). Therefore, while established legacy carriers have had much of short-haul market share eroded by LCCs, they remain the dominant presence on long-haul routes.

#### 1.3. Research Focus

The purpose of this thesis is to analyse the key elements of the LCC business model and the reason why it operates much more successfully in short-haul markets, and whether it can be adapted for the long-haul market. While the concept of a long-haul LCC is not a novel one, as Sir Freddie Laker pioneered the idea in the 1970's, various airlines have tried over the years to revive the concept in different markets, mostly unsuccessfully.

The case study of NAS, a LCC that currently operates long-haul flights from Europe to locations within Asia and North America, is conducted to examine the sustainability of its strategy. It was chosen rather than other long-haul LCCs such as Air Asia X, Scoot and Tiger Airways, because those airlines mostly operate from their Asian bases to locations in Australia. Geography has undoubtedly played an important part in the growth of LCCs within the Asia-Pacific region as the catchment area is significantly higher than that of Europe. An eight-hour flight from Kuala Lumpur is capable of capturing a population of 3.4 billion, almost half of the global population (Rowland et al., 2014; p4). Moreover, the Trans-Atlantic market is much more seasonal in nature, hindered by the reticence of Americans to travel as only 46% are in possession of a valid passport, and is characterised by a preponderance of high-yield premium cabins (CAPA, 2015a; p24). In contrast, a third of Scoot's operations fly to and from Australia, an island nation that has a high propensity to travel and is accustomed to long-haul flying given its geographic isolation.

Consequently, the economics of operating long-haul flights from Europe are far more challenging. A good example is Air Asia X, which began flying from Kuala Lumpur to Paris and London in early 2009 but discontinued those flights in 2012 because it was deemed to be unsustainable from a profitability perspective (Business Traveller, 2012). Yet it continues to operate long-haul, low-cost flights from Kuala Lumpur to cities such as Sydney and Melbourne.

Another key motivation for this thesis lies in the fact that the research to date on the topic of long-haul LCCs has been quite generalised and speculative in nature, with no definitive conclusions about whether the low-cost concept can achieve a sustainable cost advantage over legacy carriers in the long-haul market.

Therefore, the key research questions that we will focus upon are: (1) why has the low-cost business model been so successful in the short-haul market but mostly been a failure in the long-haul market? and (2) how does NAS adapt its low-cost business model to gain a sustainable competitive advantage in the long-haul market?

The research problems aim to determine whether NAS, a LCC at its core, is capable of achieving a cost advantage over the legacy carriers that currently dominate the long-haul market, and to identify exactly which elements of its low-cost model could be effectively transferred into its long-haul operations.

#### 1.4. Thesis Structure

In order to answer the research questions posited above, the structure of the thesis will be explained in this section. A graphical representation of the thesis structure is shown in Figure 2 at the end of this section.

Part Two provides an outline of the research methodology that will be used as the basis for the thesis. It will discuss the research approach, the choice of case study as the most appropriate form of research design, how the data will be gathered and the potential weaknesses associated with the case study approach. Finally, the chapter will analyse the internal, external and construct validity of the research method.

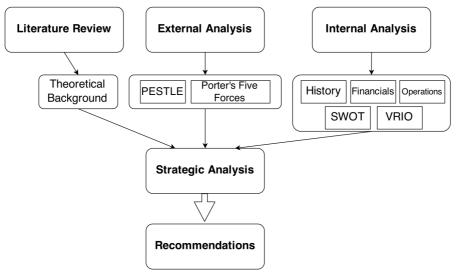
Part Three will review the previous literature on the viability of the low-cost long-haul business model with a focus on the major points of differentiation with short-haul flight operations. In particular, the choice of cabin design, airports, route networks, turnaround times, cargo, the extent to which the product can be unbundled and the ability to stimulate demand will be examined at length to determine their applicability to long-haul operations.

An industry analysis will be conducted in Part Four through the use of the PESTLE and Porter's Five Forces frameworks. These analyses aim to provide a general overview of the key factors which affect the industry as a whole. It should help to explain the almost non-existent profitability within the industry throughout most of its history, and the competitive reasons why LCCs have struggled to establish profitable long-haul operations.

Part Five presents an in-depth analysis of NAS through an overview of the airline's history and corporate governance structure, analysis of its financial performance and major metrics, the key operational issues facing its long-haul operations and how NAS is currently seeking to overcome them. In addition, an internal analysis will be conducted using both the SWOT and VRIO frameworks in order to identify the key strengths, weaknesses, opportunities and threats facing the company and how the airline will be able to leverage its strengths in order to gain a sustainable competitive advantage in the long-haul market.

Since this thesis is primarily a strategic analysis of NAS' long-haul business model, Part Six will provide a list of recommendations that NAS may adopt in the future in order to ensure that its long-haul expansion will not suffer the same fate as many other low-cost long-haul operators that have either failed to get off the ground or suffered significant financial and competitive challenges shortly after entry and were ultimately forced to file for bankruptcy and exit the market.

Figure 2: Overview of Thesis Structure



Source: Own Creation

#### 2. Methodology

The research questions stated above will be answered by conducting a case study of NAS. Due to the fact that the low-cost long-haul model is still a relatively novel concept, which has not gained widespread recognition throughout the airline industry, the goal of this thesis is to provide a theoretical explanation of the key barriers inherent in the business model as well as a practical analysis of the key issues relevant to NAS' expansion into the long-haul market.

## 2.1. Research Approach

Sachdeva (2009) states that there are two main approaches to conducting research that feel very different in its design and purpose; inductive and deductive. Inductive reasoning begins with specific observations and measures, and then moves onto the detection of patterns and themes, eventually resulting in the researcher developing a set of generalisations and theories. Therefore, there is no requirement that the researchers have any preconceived knowledge or to have developed any general frameworks before the research is undertaken (Saunders et al., 2012).

In contrast, deduction follows a more top-down approach in which hypotheses are tested through a series of observations so that it can be confirmed or invalidated (Sachdeva, 2009). This

form of research approach does not allow for the possibility of exploring subject matters that are not readily observable, and where there is no clear link between cause and consequence.

Therefore, inductive reasoning is much more open-minded and exploratory while deductive reasoning is narrower in its focus and is primarily concerned with testing and confirming a set of pre-existing assumptions (Sachdeva, 2009).

Since the determinants of whether elements of the LCC business model can be readily transferred to long-haul operations are uncertain, the use of inductive reasoning is more appropriate for this paper. This conclusion was reached after careful consideration of the numerous business strategies adopted by airlines where there are significant strategic differences even among LCCs, the dynamic market characteristics of the industry, and the broad nature of the research questions.

Denzin and Lincoln (2010) suggested that the conclusions reached with inductive reasoning are just as valid as those achieved through deductive reasoning so long as systematic observation is employed and it is capable of advancing knowledge in the relevant subject matter. The observations derived from induction are neither true nor false; instead, they are deemed to be valid unless they are invalidated.

While inductive reasoning is most suitable for our analysis, it has been suggested that a mix of induction and deduction is a more practical and preferred as it is impossible for any researcher to genuinely separate the two processes and extremely unwise to enter into a research completely theory-free (Eisenhardt, 1991; Miles and Huberman, 1994; Parkhe, 1993). Pure induction consciously denies the benefits that may be gained from existing theory while pure deduction prevents the potential development of new and useful theories. Therefore, Perry (1998) believed that the exploration of prior theory can have a pivotal impact on the design of case studies and how the data about the external reality is to be analysed.

As a result, the literature review chapter in this thesis will serve the same basic function as it does in deductive research; to outline the existing body of knowledge and identify gaps in the literature (Perry, 1998). However, these gaps are not expressed as precise, testable yes/no propositions, but rather, they are viewed as a set of general and open research issues that will be explored in the subsequent chapters of the thesis (Yin, 2014).

## 2.2. Research Design

Research design refers to the general plan that a researcher follows when attempting to answer the research question(s) so that the different components of the study can be integrated into a coherent and logical structure (Saunders et al., 2012). Choosing an appropriate research design is critical to maximising the quality of the research and its results. For exploratory research, such as the

one which will be undertaken in this thesis, there are many possible research designs including indepth interviews, case studies, document analysis, and participant observation.

Based on the nature of the topic matter, one possible approach could have been to conduct interviews with industry professionals. We approached several airlines inquiring about the potential for cooperation with the thesis, but none of them were willing to devote time and resources to assist us in our endeavours. This ruled out the possibility of conducting interviews or using participant observation. As such, it was decided that a case study would be the most appropriate research design in order to systematically examine the research questions, which aim to explore a relatively novel phenomenon, and where there is no conclusive line of theory on the topic matter (Bromley, 1990; Eisenhardt, 1989).

Our decision to use a case study approach is consistent with the beliefs of Yin (2014), who suggested that case study is most appropriate when; (1) it aims to answer questions premised on "how" and "why," (2) the contextual conditions of the phenomenon need to be outlined in order to properly describe and explain its existence, and (3) the behaviour of the subject of the study is not able to be manipulated. This thesis certainly satisfies all three of these criteria.

Another reason for the choice of a case study approach is that it allows for the use of any mix of quantitative and qualitative data, something which would not have been possible if this thesis was based on interviews, experiments or surveys (Yin, 2014). This is an important consideration as we aim to supplement our qualitative analysis with a quantitative examination of NAS' financial performance and key financial metrics.

## 2.2.1. Type of Case Study

Once it was decided that a case study would be the best research design, the next step was to decide upon the type of case study. Baxter and Jack (2008) stated that this decision should be guided by the overarching aims of the study; that is, does it aim to describe, explore or compare between cases? Yin (2014) outlined the key differences between explanatory, exploratory and descriptive case studies. Explanatory case studies should be used when seeking to answer questions that aim to explain a potential causal link in real-life interventions which are too complex for surveys or experiments. Exploratory case studies seek to examine situations that have no obvious single outcome while descriptive case studies aim to depict the phenomenon being investigated and the real-life context in which it occurred.

Although this thesis does intend to describe the key characteristics of the airline in industry and to look into the reasons why the success of the LCC model has not been replicated in the long-haul market, it is ultimately an exploratory case study into the strategy of NAS and aims to evaluate whether the company possesses the requisite financial and organisational resources to become the

first European LCC to successfully penetrate the long-haul market. There is no clear solution for its predicament and any conclusions reached in this thesis are incapable of providing any clear causal explanation for the past failures of LCCs nor to predict the future success of LCCs in the long-haul market.

#### 2.2.2. Data Sources

The use of qualitative data will allow us to gain a thorough understanding of the key challenges facing NAS in its expansion into the long-haul market. The qualitative analysis will be supplemented with quantitative data to investigate whether our observations and conclusions can be supported by the business and industry data. The benefit of using both qualitative and quantitative data is that it neutralises the limitations of each method and allows for a more comprehensive outcome (Jick, 1979). The objectives of the thesis are best served through a combination of quantitative and qualitative data due to the inherent difficulties of quantifying and explaining the many market and non-market obstacles that must be overcome by NAS in its long-haul operations.

Since it is widely accepted that exploratory case studies essentially aim to gather as much data as possible in order to explore and describe the existence of the phenomenon, a variety of data sources ought to be used to rigorously analyse it from a range of perspectives so that multiple facets of the phenomenon can be revealed and understood by researchers (Baxter and Jack, 2008). The use of multiple data sources also has the benefit of enhancing the credibility of the data (Patton, 1990).

In this thesis, one of the main difficulties stems from the fact that, without the cooperation of any airline, we lacked any contacts within the industry to assist us in our data collection. Since airlines are generally disinclined to discuss their costs and revenue sources in detail, we were compelled to rely on secondary data from a range of sources such as airline annual reports, industry bodies such as IATA, market outlooks published by Boeing and Airbus, academic journals, newspaper and magazine reports, textbooks and online resources.

While the use of secondary data lacks the reliability of primary data, it does provide a range of benefits in the sense that it can be better tailored to suit the objectives of the research, it may come from more technically reliable sources, it is less subjective than primary data and the collection of secondary data requires less resources, both in terms of time and money (Bryman and Bell, 2011).

#### 2.2.3. Data Criticism

When qualitative data is used, it has the potential to raise questions of bias as the results may be interpreted in such a way that is tailored towards the objectives of the researchers (Miles, 2014). Therefore, there is a risk that the phenomenon is presented as more patterned than it really is. We have strived to minimise this risk by analysing the qualitative information using a large number of

different sources and aiming to provide an analysis that is as objective as possible by simply presenting the financial and strategic position of NAS as it is presently constituted.

Another issue arises from the fact that the quantitative data is mostly gathered directly from the airlines themselves. While we consider the data to be reliable as they are published in annual reports and subject to strict financial reporting regulations, the reality is that they were gathered for purposes other than for the case study in question. The result being that we may lack familiarity with the data, and possess no control over its quality or complexity. While we acknowledge these limitations, it is unavoidable given our lack of industry connections. Therefore, we have tried our best to analyse the financial data in a clear and concise manner given our respective educational backgrounds, which have had a major focus on Finance.

#### 2.2.4. Delimitations

With the exception of the price comparisons conducted in Part 5, all the data used in this thesis were derived from sources prior to 2015. Therefore, any additional data or competitive developments occurring after the 1<sup>st</sup> of January, 2015 were not included.

#### 2.3. Validity

The quality of this case study can be judged by three types of validity; internal, external and construct. Validity is crucial not only to ensure the quality of the findings but also to disclose the potential weaknesses and limitations of the research (Zikmund et al., 2012).

## 2.3.1. Internal Validity

Internal validity refers to the extent to which the results obtained in the research are true and caused by changes in the experimental variable (Zikmund et al, 2012). Since the purpose of this case study was not to examine the cause and effect of NAS' long-haul operations, but rather, to explore whether its strategy is likely to be successful, no issues of internal validity arise.

## 2.3.2. External Validity

External validity refers to the accuracy with which the results can be generalised beyond the subjects and situations involved in the research (Zikmund et al, 2012). This thesis focuses on the idiosyncratic characteristics of NAS' operational, financial and strategic strategy and as such, it cannot be readily translated to another context. Therefore, it will be difficult for the hypotheses generated to be tested beyond the scope of this particular research and for relevant information to be extracted outside of the immediate context of the case being investigated.

However, if NAS is able to succeed in its long-haul operations, certain traits that are inherent within its business model may be replicated by other airlines in the search for viable long-haul operations of their own.

## 2.3.3. Construct Validity

When conducting research, it is important to ensure that the results actually measure what they claim to measure (Zikmund et al., 2012). Therefore, construct validity focuses on whether the research questions have been sufficiently and appropriately answered throughout the case study.

In this thesis, the question of why the success of LCCs has not been replicated in the long-haul market is answered through the literature review of the various characteristics of the LCC business model that are not easily adaptable to the long-haul market. In addition, the particular characteristics of the airline industry are analysed using the PESTLE and Porter's Five Forces frameworks in order to provide an overview of the key factors influencing all competitors and the challenges that confront LCCs in their attempt to gain a competitive advantage within this industry structure.

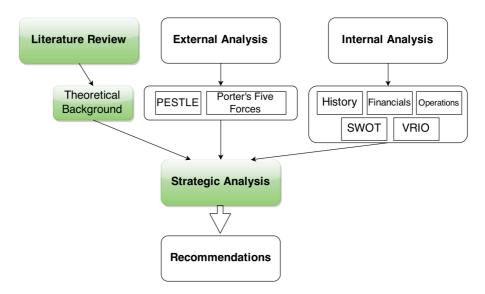
The second question of whether NAS will be able to adapt its business model to succeed in the long-haul market is answered through an in-depth analysis of: (1) the company's financial performance and key financial metrics, which are compared with those of its major rivals in the industry, (2) a SWOT analysis examining the major strengths, weaknesses, opportunities and threats facing NAS, (3) a VRIO analysis of the company's key resources which are capable of providing it with a sustainable competitive advantage in the long-haul market, and (4) an overview of how it is seeking to overcome key operational issues such as cargo, connections and aircraft utilisation.

Since this research is based on a "how does?" problem, Perry (1998) suggested that the final chapter of the thesis must always present a proposal as means of solving the research question. In our case, the final chapter provides a set of recommendations for NAS that it may adopt in the future to enhance the long-term viability of its long-haul operations. Therefore, we believe that the structure of the thesis has been constructed in such a way as to maximise construct validity and to answer the research questions in the best possible manner, when taking into account our lack of industry connections and the secondary data that was readily available to us.

#### 3. Literature review

In the following section, the prior literature on the topic of low-cost long-haul airlines is explored to provide a general outline of what has been published in the past and what the main findings of those researchers were. In particular, this chapter will focus on key differences between LCCs and legacy carriers that have been previously identified. In addition, the analysis also discusses why these factors are considered to be obstacles that prevent LCCs from successfully adapting their business model to establish economically feasible long-haul operations. Figure 3 shows how this chapter fits within the structure of the thesis.

Figure 3: Literature Review



Source: Own Creation

Through this literature review, we aim to provide a theoretical answer to the first research question of why LCCs have had difficulties in emulating their short-haul market success. Moreover, by exploring the previous literature, it will also assist in answering the second research question of the critical areas that NAS must address in order to be profitable in the long-haul market. The way that NAS has actually sought to overcome these operational issues is discussed in Part Five.

While we also encountered other issues that were mentioned in various articles throughout our research, the factors discussed below are the ones that were the most prevalent and those that we believed to be the most pertinent issues facing NAS as it continues to expand its network across the Atlantic and towards Asia.

#### 3.1. Single Class Cabin

Traditionally, LCCs have tended to only offer single-class, economy cabins along their operating routes in order to maximise passenger density (Francis et al., 2007). Although some LCCs such as AirTran Airways and Spirit Airlines have made changes to this strategy by providing their customers with the option of a premium cabin, Noakes (2013) noted that these cabins can be more accurately described as "Premium Economy" cabins rather than the more luxurious Business and First Class options offered by legacy airlines.

On short-haul routes, the single class cabin has allowed LCCs to gain significant market share and generate revenue growth by maximising the number of passengers that can be flown on each individual flight. However, on long-haul routes, legacy carriers hold a significant advantage as they are able to charge exorbitant fares for their premium class seats, often in excess of \$5000 for a Trans-Atlantic flight (Francis et al., 2007). Lian and Denstadli (2004; p109) estimated that business

travellers account for almost 75% of airline passenger revenue on long-haul routes despite representing only a fraction of the total customer base. The enormous margins that legacy carriers are able to extract from these high-value customers allow them to subsidise the fares offered to economy class passengers. As a result, legacy carriers have been able to offer highly competitive fares for economy class seats.

If LCCs choose to stick with a single class cabin configuration on long-haul flights, they would need to markedly increase the revenue needed from each seat to generate a sustainable profit. Moreover, common sense dictates that the level of comfort required increases proportionally with the length of the journey. Therefore, it will be difficult for LCCs to reduce the seat pitch to the 29" configuration that is common for short-haul flights as it would greatly diminish the quality of the flying experience of their consumers on long-haul flights (Francis et al., 2007).

Therefore, a common line of reasoning is that LCCs will experience difficulties in undercutting the economy fares of legacy carriers since they already achieve low seat kilometre costs on long-haul flights and have been able to achieve average load factors exceeding 80% in their long-haul operations, offering little room for improvement for any potential low-cost entrant (Francis et al., 2007; Wensveen and Leick, 2009; Daft and Albers, 2012).

## 3.2. Secondary Airports

In the short-haul market, the majority of LCCs make use of secondary airports, which are located further from metropolitan areas but offer lower user fees, reduced traffic congestion and better ontime performance (Francis et al., 2007). In addition, these secondary airports are also able to provide better access to passengers in those particular catchment areas than legacy carriers operating from hub airports in larger metropolitan areas (Wit and Zuidberg, 2012).

Overall, studies have found that airports have experienced substantial traffic growth as a result of LCCs (Graham, 2013; Abda et al., 2013). Maertens (2007) demonstrated that secondary airports such as Manchester and Düsseldorf have developed into critical links in airline networks in their respective regions due to the fact that they have been able to attract a significant number of services and passengers.

The importance of LCCs to passenger traffic has compelled important hubs such as Amsterdam's Schiphol Airport, Kuala Lumpur's International Airport and Singapore's Changi Airport to build low-cost terminals specifically to accommodate the operations of the LCCs in their region (Poon and Waring, 2010). The LCC terminals are especially tailored to the low-cost business model as they lack value-added services such as airline lounges and are designed for rapid processing of large numbers of passengers to minimise cost and achieve higher operational efficiency.

Although Morell (2008) suggested that the use of secondary airports is also possible for long-haul flights if they satisfy operational standards and are capable of handling larger aircraft, there are other issues that may make them a poor substitute for primary hubs. For example, many of them are located too far from demand, and their relative inaccessibility is undesirable for long-haul flights (Wit and Zuidberg, 2012). While passengers may be willing to connect through a secondary airport for short flights, they will likely be far less enthusiastic about significant additional travel time after a 10 hour intercontinental flight. Others are simply incapable of supporting round-the-clock operations that would be demanded from an intercontinental operation (Wensveen and Leick, 2009).

Since most secondary airports have no existing long-haul services, and the fact that they would cause a reduction in operational efficiencies, Wensveen and Leick (2009) have concluded that secondary airports provide little competition for established international hubs as the situation currently stands. Hancioglu (2008) goes a step further by declaring that hub airports exhibit the characteristics prevalent in natural monopolies. 60% of all long-haul traffic in Europe is concentrated in the four major airports of London Heathrow, Frankfurt am Main, Amsterdam Schiphol and Paris Charles de Gaulle (Dennis, 2007; p4).

#### 3.3. Faster Turnarounds

Partially due to the fact that they make extensive use of less congested secondary airports, LCCs are able to produce quick turnarounds of their aircrafts on short-haul flights, often in less than half an hour (Morrell, 2008). This allows them to operate more flights every day to maximise the productivity of their aircraft and crew, and generate higher yields. Research by Israel (2014a) found that LCCs have 4.5 average aircraft rotations per day and average utilisation in excess of 11 hours, when compared to 3.8 rotations and 9 hours of utilisation for legacy carriers.

Such a short turnaround is logistically impossible for long-haul flights as the larger aircraft needed for those routes invariably take more time for refuelling, loading and to undergo scheduled maintenance (Israel, 2015). Airport curfews and time zone changes complicate the matter even more. Nevertheless, Wensveen and Leick (2009) suggested that the inability to generate quick turnarounds will not act as a hindrance to the success of LCCs as long-haul aircraft already spend upwards of 15 to 16 hours in the air daily. However, it does mean that there is little room for LCCs to generate a competitive advantage through more efficient aircraft utilisation.

#### 3.4. Point-to-Point Flights

In the short-haul market, LCCs have been able to tap into the increased demand for non-stop flights by offering point-to-point services (Berry and Jia, 2010). Direct flights also provided the additional benefit of shorter turnarounds and reduced costs related to flight and luggage transfers.

The general rule of thumb is that long-haul flights operate at much lower frequencies when compared to their short-haul counterparts because they are able to generate high utilization through lengthier flight segments (Wensveen and Leick, 2009). However, Morell (2008) anticipated that a network configuration built around low-frequency, point-to-point services would not be viable in the long-haul market as there are very few long-haul routes capable of supporting point-to-point flights. Demand for long-haul services is much more scattered geographically and often originates from regions that are located far from any cities capable of sustaining long-haul point-to-point operations.

Indeed, Dennis (2007) hypothesised that apart from London, and perhaps Amsterdam, Paris and Frankfurt, no other city in Europe is capable of supporting dense intercontinental flights to Asia or North America without a significant amount of feeder traffic. The concentration of long-haul traffic at the major European hubs inherently reinforces the incumbency advantages that legacy carriers currently possess as they occupy the prime slots at these airports, allowing them to charge higher fares than would be expected under perfect competition (Goldsbee and Syverson, 2008).

In light of this, LCCs may be forced to subject themselves to the additional costs associated with the provision of connecting flights as a much higher percentage of passengers have to connect at one or both ends of their long-haul flight (Morell, 2008).

The alternative is that passengers must "self-hub" by utilising the services of other carriers using a separate flight itinerary (Wensveen and Leick, 2009). This solution forces the risks of flight transfers to be borne by the self-connecting passenger rather than the individual airlines. Given the complexity of intercontinental flights, this is a risk that passengers may not be willing to bear, especially if LCCs remain stubborn in their reluctance to compensate passengers in the event of flight delays.

#### 3.5. Unbundling the Product Package

For most legacy airlines, included in the price of the flight ticket are additional services such as allocated seats, on-board catering and a pre-determined amount of checked luggage. One of the main ways in which LCCs have been able to undercut the prices offered by legacy airlines was to "unbundle" every possible component of the product offering so that the fare paid by the passenger was purely for the seat on the flight (Whyte and Lohmann, 2015a). If a passenger wanted other services such as in-flight entertainment, food or airport check-in, extra fees would be added. Not only did this add another source of revenue, but it also led to cost reductions in the form of lower fees for baggage handling, catering, check-in staff and aircraft cleaning (Wit and Zuidberg, 2012).

The profits generated from these ancillary revenue streams have been difficult to ignore and some legacy airlines have also started to unbundle their product. For example, Austrian Airlines and Swissair charge extra for the seat allocation, while American Airlines charges for checked luggage on

domestic flights. According to IdeaWorks (2014; p1), the ancillary revenues generated by the industry reached \$31.5 billion, a 1200% increase since 2007. Many LCCs rely on these ancillary revenues for their survival. For example, Wizzair and Allegiant generated over 30% of their total revenues from ancillary income, while that figure was almost 40% for Spirit Airlines (IdeaWorks, 2014; p3). Although NAS is less reliant on this revenue stream, ancillary revenues still represented 17% of its revenues in the first quarter of 2015 (CAPA, 2015b)

GAO (2010) believed that this pricing strategy is partially based on exploiting the psychology of consumers as base fares are much more visible than the optional extras. Therefore, the lower base fares have a bigger positive effect on sales than the negative effect generated by large add-on fees.

Nevertheless, on long-haul flights, Wensveen and Leick (2009) believed that it will be difficult to eliminate "frills" altogether as services such as meals, in-flight entertainment and seat pitch escalate in value as the length of the flight increases. Consequently, this will add an extra layer of costs associated with the loading of catering onto planes, cleaning the aircraft upon arrival and the opportunity cost that greater galley space reduces the number of seats which can be fitted onto the aircraft (Francis et al., 2007). Therefore, Onions (2014) believed that, after taking into account the cost of in-flight necessities, it is likely that travellers will continue to book with full service carriers in order to receive a better, all-inclusive package.

## 3.6. Cargo

The transportation of passengers is not the only potential source of revenue for airlines as cargo is another stream of income that is particularly important for airlines over longer distances (Morrell, 2008). As a general rule, LCCs have tended to avoid transporting cargo on short-haul routes. Cargo increases loading times and inhibits their ability to maximise aircraft utilisation.

However, on long-haul connections, where turnaround times are unavoidably longer, it would be foolish of LCCs to neglect cargo as a revenue stream. Although the majority of cargo is transported by freighters, the increased cargo capacity on new-generation aircraft such as the Boeing Dreamliner, which have much larger lower-hold cargo capacities, make it an attractive option as there are cost savings to be achieved from the economies of scale generated through the transportation of passengers and cargo concurrently (Button and Pels, 2010; Boeing, 2014). IATA (2014a; p1) calculated that the world's airlines transported 51.3 million freight tonnes in 2014, generating revenues in excess of \$60 billion. When you compare this number to the \$38 billion in operating profit that was generated by airlines worldwide, it becomes quite clear that cargo is a critical source of revenue to make long-haul flights economically viable.

## 3.7. Stimulating Demand

Within the development of their short-haul network, LCCs have tended to focus on launching new routes that were not previously served by legacy carriers (Dobruszkes, 2013). The result has been that they have overcome issues related to low route density by generating new demand (Wit and Zuidberg, 2012). Israel (2015) stated that LCCs have not only been able to gain market share from legacy carriers, but they have also been able to generate more air traffic by diverting the demand from other modes of transportation.

However, the length of the journey on long-haul flights means that the capacity to stimulate new demand is far more limited (Francis et al., 2007; Israel, 2015). Dennis (2004b) found that existing carriers already have much higher load factors, up to 20% more in the case of Lufthansa on long-haul routes when compared to short-haul. Along the Trans-Atlantic route, load factor sits at an average of 83% while the load factor between Europe and Asia is 81% (Israel, 2015).

## 3.8. Summary

This literature review suggests that there are clear differences between the LCC business model that has been successful in the short-haul market and the type of business model that will be required to succeed in the long-haul market. However, the reality is that the bright line differentiating the operations of LCCs and legacy carriers is becoming increasingly blurred as airlines are constantly adapting key elements of their business model in order to survive in the dynamic business environment in which they operate.

As such, it has been observed that the conflating factors of low profit margins along with increased competition have forced legacy carriers to adopt low-cost features in their product offering and some have even gone as far as establishing low-cost subsidiaries of their own in order to compete with LCCs along certain routes (Francis et al., 2012; Franke and John, 2011). At the same time, the hybridisation process is also working in the other direction as LCCs have adopted some features of full-service legacy carriers in order to differentiate their services from other LCCs (Morandi et al., 2015; Klophaus et al., 2012).

Therefore, the fact that LCCs will have to adapt certain elements of their core business model to compete effectively in the long-haul market is not an obstacle in and of itself. The more critical issue is whether they are able to differentiate their product offering sufficiently to attract customers away from legacy carriers and gain sufficient market penetration to feasibly prosper in the long-haul market. Table 1 outlines the key features of the LCC business model in the short-haul market and how certain features need to be adapted for long-haul operations.

Table 1: Key Differences between LCCs, Legacy Carriers, and Low-Cost Long-Haul

Operational Issue	<u>LCCs</u>	<b>Legacy Carriers</b>	Low-Cost, Long-Haul Model
Cabin Configuration	Single class cabin	Multiple classes; economy,	Multiple classes will be necessary
		business, first	to maximise revenues
Airport Location	Primarily secondary airports	Makes extensive use of hub	Airports with capability to handle
		airports	larger long-range aircraft in cities
			with sufficient traffic flow
Turnaround Times	Short turnaround times to	Longer turnarounds required	Turnaround times will be longer
& Aircraft	maximise aircraft utilisation	as aircraft must wait at hub	but aircraft utilisation will be high
Utilisation		airports for all connecting	due to longer flight lengths
		flights to arrive	
Route Structure	Point-to-point network	Offers direct flights between	Point-to-point will only be
	serviced by single type of	hubs with connecting flights	feasible on a limited number of
	aircraft	to non-hub locations	routes; should consider
			interlining agreements
Product Package	Unbundled; customers pay for	Full service; fare paid usually	Still unbundled but may need to
	seat with additional services	includes checked baggage,	include allocated seating and
	available for a fee	allocated seating, food and in-	catering services
		flight entertainment	
Cargo Services	None or limited to small	Most provide cargo services	Important source of revenue that
	parcels so that it does not affect	to maximise payload and	will be difficult to ignore
	turnaround times	revenues from each flight	
Stimulation of	Diverted traffic from other	Tended to focus on more	High load factors make it
Demand	transport modes and created	traditional city pairings	difficult for stimulation of more
	demand to new destinations		demand along dense routes

Source: Own Creation

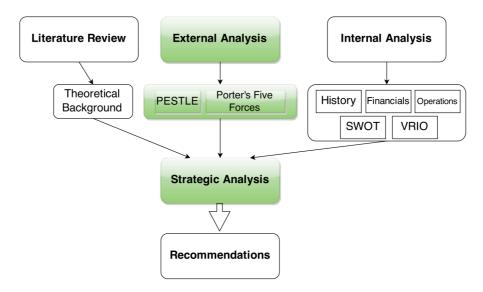
## 4. External Analysis

In order to understand why LCCs had experienced difficulties in the long-haul market, it is necessary to explore the key industry characteristics that affect the profitability of airlines, the risks that they face and the major trends within the industry and the wider economy that will shape airline operations in the future.

This chapter is divided into two sections. The first part will examine the macro-environment in which NAS operates. These factors are wholly external to the company and as such, NAS cannot control when and if they occur. However, NAS must actively monitor developments in the macro environment to minimise risks and maximise the opportunities that any changes may present. The second section will look at the micro-environment to assess how the industry's competitive forces conflate to determine the profitability of individual airlines and the airline industry as a whole.

Through this analysis, we hope to provide further insight into the first research question of why the structure of the airline industry has allowed LCCs to thrive in the short-haul market but continuously hindered their ability to penetrate the market dominance of legacy carriers on long-haul routes. Figure 4 displays how this chapter contributes to the strategic analysis of NAS.

Figure 4: External Analysis



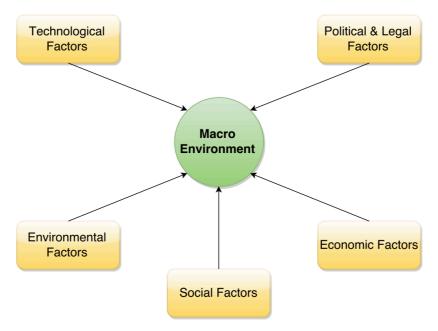
Source: Own Creation

## 4.1. PESTLE Analysis

The PESTLE model decomposes the major macroeconomic factors affecting the industry into six categories; political, economic, social, technological, legal and environmental (Henry, 2008). The analysis in this section will seek to identify the structural drivers of change within the industry. By undertaking such an analysis, it will provide a better understanding of the external factors that are capable of both having a significant impact on NAS' operations and shaping the company's strategy into the future. In turn, this will affect the potential viability of its long-haul operations. Figure 5 illustrates how these six factors contribute to the macro-environment in which airlines operate.

However, given the highly dynamic nature of commercial aviation today, this section is by no means an exhaustive list of all the factors that are capable of shaping airline industry dynamics. We have simply chosen to focus on the factors which we have identified as being the most relevant for NAS and its expansion into the long-haul market.

Figure 5: PESTLE Framework



Source: Own Creation, adapted from Henry (2008)

## 4.1.1. Political & Legal Factors

In this section, the political and legal influences on the airline industry will be discussed together due to the high degree of overlap between the politics inherent in international aviation and its resulting impact on the legal environment in which airlines operate. As NAS continues to expand internationally, its ability to compete with larger flag carriers is highly dependent on the regulatory environment as different policies on taxation, subsidies, divergent passenger rights regulations and ownership restrictions all have an adverse impact on the airline's profitability.

## **History of Regulation**

The Paris Convention of 1919 established the foundational rule of international aviation; that every State has absolute sovereignty over their airspace and no air services can be operated unless explicitly authorised by that State (Williams, 2002). With that law in place, governments around the world established regulations to control the use of their airspace.

At the outset, government investment in the aviation industry was mainly for military purposes. It was only after the Second World War that the focus of the industry shifted towards commercial aviation (Williams, 2002). The Chicago Convention of 1944 was an important stepping stone for the future development of the industry as it established the basic framework for the regulation of international air transportation and it recommended the establishment of an international body responsible for coordinating the rules related to aviation operations on a global basis, to develop international standards and to ensure that these rules would be adhered to (Belobaba et al., 2009). As a result, the International Civil Aviation Organisation was formed in 1947.

Nevertheless, the lingering effects of the war meant that much of the development in the industry was due to the creation or expansion of national flag carriers, which were heavily subsidised, and used as devices to enhance the status and reputation of the country in the highly sensitive postwar political environment (Button and Pels, 2010). The protectionist policies adopted throughout the industry were justified on the basis of the infant industry argument; that is, the immaturity of the industry along with the high capital requirements necessary to operate airlines meant that they needed to be protected from external competition in order to provide the requisite level of route coverage, ensure safe operations and allow the fledging airlines to grow their very expensive operations (McDonnell, 2015).

By the middle of the 1970's, the industry had reached a point where continued government interference could no longer be rationally justified as it had a restrictive impact on market access, fare prices, route networks, industry capacity and service frequency (Williams, 2002). This situation led Lyth (1993) to state that the protectionist policies were purely nationalistic in nature and represented a strict form of mercantilism that was wholly unjustified.

## **Deregulation & Open Skies**

When the U.S. enacted the Airline Deregulation Act in 1978, it represented the first step in the deregulation process that would prove critical in shaping the nature of the industry in the years to come. The goal was to achieve three fundamental freedoms; freedom to access global capital, price service in line with market conditions and more open market access (Mojsoski, 2014). In the period shortly after deregulation, there was a rapid expansion of routes by existing carriers and 47 new carriers entered the U.S. domestic market by 1984 (Rose, 2012; p379).

As other countries around the world have followed the lead of the U.S., it has paved the way for the development of Open Skies agreements, the first of which was established between the U.S. and the Netherlands in 1992 (Cosmas et al., 2008). A landmark in aviation history was reached in March, 2008 when the U.S. and EU agreed to terminate all bilateral agreements and establish an "Open Aviation Area" which would remove restrictions on routes, fares and marketing agreements (Morandi et al., 2014).

Although it has been estimated that countries with liberalised air transportation markets have experienced growth in traffic exceeding 50% and brought about the expected benefits for airlines, consumers and employees alike, the sobering reality is that "Open Skies" has only been embraced by a limited number of countries and trading blocs with its benefits limited by the fact that many countries still aim to protect their flag carriers from perfect competition (Edwards, 2007).

Even countries that have been committed towards liberalisation in the past such as the Netherlands have warned that they may prohibit the future entry of foreign carriers if it has too much of a negative impact on national carriers (Knibb, 2015). Within the Nordic market, both SAS and Finnair are still subsidised by the government with NAS being the only major Nordic carrier operating completely independently. This distortion also persists in the international market, where Wojahn (2012; p3) found that 20 of the 69 publicly listed airlines in his data set were partly state-owned with an average level of government ownership of 52.4% in 2012.

There are also still significant inequalities within the system. For example, U.S. airlines were granted full cabotage rights within the EU but the same level of market access was not granted to European airlines in the U.S. domestic market (Morandi et al., 2014). Moreover, deregulation has failed to remove ownership and control restrictions within the industry. In the EU, foreign entities are allowed to own 49% of European airlines, but that foreign ownership limit is capped at 25% for U.S. airlines (Cosmas et al., 2008). These discrepancies mean that there is still a lot of room for progress if the aspiration for a fully integrated international aviation system is to be achieved.

Although there are no clear market failures to justify such an excessive level of continued government interference, the reality is that airlines still wield a large amount of political influence due to their status as one of the largest job creation industries and the important role they play in facilitating other industries such as tourism (Button and Pels, 2010). As such, it leads to distortions within the international aviation industry as the disparities in laws regulating the labour market, tax rules and accounting standards along with restrictions on cross-border investments dictate that the nationality of an airline still remains an important factor influencing their competitiveness and reinforces the structural rigidities inherent in the market (Edwards, 2007). In fact, Sandstrom (2013) argued that much of the overcapacity prevalent in the industry today stems from the seats offered by legacy carriers that would have become insolvent many years ago if not for the continued existence of government subsidies. As a result, Tyler (2013) encouraged all countries to consider further actions and regulatory reform in order to enhance connectivity, and maximise the economic and social benefits provided by airlines.

## 4.1.2. Economic Factors

While all industries are affected by the general level of economic activity, the airline industry is particularly susceptible due to the fact that they provide an intermediate service that relies on other industries for sustainable profits. Therefore, this section will examine four key economic factors that drive the industry's growth and profitability.

#### **High Capital Costs**

The total operating costs incurred by airlines can be divided into fixed and variable costs. Fixed costs can be defined as those which must be incurred irrespective of the number of passengers flown on any individual flight such as investment in the physical aircraft, airport slots and cabin crew

(Button, 2004). On the other hand, variable costs are those directly correlated with passenger traffic such as additional check-in staff or additional food on a given flight. Within the aviation sector, fixed costs are exponentially larger than variable costs (Doganis, 2010). This imbalance means that once fixed costs are accounted for and a flight has reached the breakeven point, each additional passenger provides the airline with huge profit margins (Button, 2004). The natural consequence is that the industry is highly leveraged and acutely sensitive to shifts in fare prices and demand, as even a small change has the potential to have a disproportionate impact on operating margins. Therefore, the industry's capital and labour intensive nature means that a large number of airlines will experience financial distress in the event of an unforeseen grounding of the fleet or if there is a sustained period of weak demand.

#### **Price Discrimination**

The heterogeneous preferences of consumers, constant demand fluctuations, and the ambiguity of when and where travellers will travel along with capacity constraints and the perishable nature of airline seats dictate that price discrimination is necessary to maximise revenue generation from every flight (Alderighi et al., 2012).

Although fare prices may be different for travellers on the same day, even in the same cabin class, the general rule is that fares are cheaper when booked well in advance of the departure date as leisure travellers have a lower willingness to pay but are more flexible in their travel dates and as such, will seek the lowest fares available (Tretheway, 2008). By capturing these customers early, airlines are able to ensure that the backend of the aircraft will be sufficiently filled. As the departure date approaches, fares increase because last-minute travellers are less price sensitive as they must make the flight in order to reach their destination at a specific point in time.

In addition, many airlines also divide their customers into segments based on factors other than simply price sensitivity such as providing flexible tickets, VIP lounges, frequent flyer points, and the imposition of restrictions such as weekend stays in order to create a highly dynamic pricing structure tailored to the needs of specific customers (Whyte and Lohmann, 2015a).

## Cyclicality

The profitability of the airline industry is highly cyclical in nature due to the fact that air travel fluctuates in sync with the broader economic conditions (Lian and Denstadli, 2004). The correlation between income and demand for air travel varies from between 1.5 to 2.0 for short-haul and 2.4 to 2.7 for long-haul routes (Smyth and Pearce, 2008; p9). As a consequence, when the industry is going through a downswing, it leads to significant reductions in revenues, massive industry overcapacity and widespread financial distress.

However, there have been disparities in the ability of LCCs to cope with the recent Global Financial Crisis when compared to legacy carriers. Diaconu (2012) found that the four largest European LCCs were able to sustain positive growth in passenger numbers and profits between 2007 and 2011, which was in stark contrast to the difficulties faced by legacy carriers in this period. The superior operational performance of LCCs reflects the increasing price sensitivity of consumers along with the loss of the glamour associated with flying, leading to the situation where many more travellers are willing to tolerate lower levels of service in exchange for cheaper fares (Alderighi et al., 2012). Moreover, corporate travel is highly correlated to activities such as international trade and FDI, and when global GDP slows, it disproportionately affects the bottom line of legacy carriers who are far more reliant on the revenue stream generated by business travellers.

#### **Derived Demand**

Unlike other industries, the demand for air travel is derived demand. That is, it is dependent on a consumer's desire to achieve another objective such as attending a business conference, enjoy their summer holidays or to visit friends and family (Button and Pels, 2010). In this regard, international aviation is critical for the development of other industries and of whole regions as it acts as a catalyst for job creation, increased tourism and the stimulation of economic growth.

#### 4.1.3. Social Factors

This section outlines three major social changes that have occurred in recent times that have affected the way that consumers travel and how often they travel. These changes have fundamentally altered the way in which airlines market and distribute their products and how they structure their routes in order to satisfy the changing needs of their customers.

#### Travel Agents & Online Sales

In the past, travel agents were a key link in the sale and distribution of airline tickets with the proportion of tickets sold by travel agents reaching a peak of more than 80% in the mid 1980's (Lewis and Talalayevsky, 1997; p26). Their role was not simply as an extension of airline reservation offices, but they also provided consumers with a valuable service by assisting them in the search and evaluation process, and to filter out unnecessary information. Due to their prominent role in networking airlines with travellers, travel agents were able to gain significant bargaining power and attract large commissions from airlines reliant on the services which they provided.

However, the rapid rise of the Internet in the last 15 years has eroded the market power that travel agents have historically enjoyed. The prevalence of online search engines today has substantially reduced search costs and consumers are increasingly willing to arrange their own travel itineraries (O'Connell and Williams, 2005).

The results have been dramatic. In 1996, almost all tickets were sold directly by airlines or through travel agencies, with less than 0.5% sold online (Berry and Jia, 2010; p3). By 2007, up to 60% of tickets were purchased online in the U.S. In 2013, approximately 80% of NAS sales were conducted via online channels (Norwegian Annual Report, 2013).

As a consequence, Oxford Economics (2010; p10) suggests that travel agents must reinvent their role within the value chain and focus upon their ability to cope with "complex and demanding travel arrangements in the context of consumer time poverty."

## Thirst for Travel

As the incomes of people continue to rise globally, there has been a corresponding increase in the capacity and desire of people to travel (Peterson, 2010). This is reflected by Boeing's forecast that airline traffic will grow at an annual rate of 5% in the next 20 years (Boeing, 2015; p2).

In Norway, its citizens exhibit a deeply entrenched travel appetite as a result of their desire to broaden their horizons and the perception that travel is an essential part of their national identity and personal lifestyle (Becken, 2007; Gössling, 2009). Therefore, in spite of their general perception that air travel is a significant contributor to global warming, they have shown little inclination to curtail their travel habits as it is considered to be too important to be constrained by abstract issues such as climate change (Hares et al., 2010; Higham and Cohen, 2011).

In other parts of the world, continued liberalisation is opening up new routes and markets, while improvements in the infrastructure are allowing airlines to rapidly expand operations to cope with increased demand generated by rising middle classes in developing countries (Boeing, 2015).

## **Shifting Consumer Preferences**

Historically, travellers have preferred one big trip per year (Alderighi et al., 2012). However, in recent times, there has been a trend towards multiple, short holidays every year. As a result, airlines must change the way in which they market to consumers as well as the routes in which they operate in order to capture market share as the demand dynamics change within the industry.

Another key recent trend has been the demand for safe, low-cost travel, even if it is accompanied by a lower level of service (Martin et al., 2008). This demand is not simply from cost conscious leisure travellers, but also from business travellers, especially in the aftermath of the Global Financial Crisis. When looking at the American market, Neal and Kassens-Noor (2011) found that there was a tendency for business passengers to fly with LCCs such as Southwest and JetBlue, eschewing their traditional loyalty to legacy carriers. In addition, Huse and Evangelho (2007) found that, once business travellers have flown with a LCC, they tend to overcome their previous misconceptions about the service offered by LCCs and exhibit a more positive impression afterwards.

## 4.1.4. Technological Factors

Given the fact that the industry is routinely at the forefront of technological development and has been the pioneer in the adoption of many innovations, it is unsurprising that continued technological development will be a key driver of change within the industry in the future as the development of new generation aircraft that are capable of increasing range while also reducing fuel consumption (Button, 2004). In addition, information communication technology ("ICT") has infiltrated into every aspect of airline operations and as such, any disruptive innovations on this front will drastically alter the way in which airlines operate, communicate and distribute their products.

## <u>Information Communication Technologies</u>

Buhalis (2004) stated that the airline industry was among the first industries to realise the importance of ICT. One of the earliest, and most important, innovations was the introduction of the SABRE computer reservation system by American Airlines, which allowed it to automate the ticket reservation process. At first, it was introduced for the purposes of yield management to efficiently match supply with demand so that it was able to segment the market according to an individual consumer's willingness to pay and maximise revenues on any given flight. As the system became more sophisticated and adopted by other airlines, it has developed into a key decision making tool in areas ranging from route management to the optimal scheduling of crew.

Today, airlines are dependent on ICT for all aspects of their operational and strategic management. ICT solutions now provide airlines with the ability to optimise their activities in real time to react to rapidly changing circumstances caused by factors such as the weather or airport traffic congestions (Boeing, 2015).

Moreover, airlines were early adopters of the Internet as a sales and distribution channel (Buhalis, 2004). They realised that it would not only be an effective means to reduce costs, but also increase the convenience for customers. Almost all international airlines today have an online reservation system and online sales have become the predominant distribution mechanism throughout the industry. Customers also have the possibility for online check-in and the printing of boarding cards.

Overall, ICT has been integral to improving operational efficiency, maximise safety, reduce costs and enhance the flying experience for customers, all the way from the booking process until arrival at their final destination.

## Aircraft Improvements

The new-generation aircraft being manufactured by Boeing and Airbus are exponentially more sophisticated than their predecessors. Not only are they more fuel efficient and quieter but they also improve the aircrafts' range and payload capabilities (Boeing, 2015). According to IATA, (2011a;

p10), improvements in the materials and aerodynamics of modern aircraft along with enhancements in engine technology has meant that the modern fleet of aircraft are more than twice as fuel efficient as they were 40 years ago. As their range has expanded, it allows airlines to expand the size of their networks while also maximising their profit on a particular route by using the greater payload capability to fit more passengers and cargo on an individual flight.

#### 4.1.5. Environmental Factors

As global warming continues to be a political imperative in developed economies, it will affect the way in which the airline industry will be regulated and increase the aspiration for the development of more fuel efficient aircraft and alternative fuels. This section will outline four key environmental factors facing the airline industry in the foreseeable future.

### Climate Change

The alarming rate at which the climate is changing has focused attention on the potential challenges that it will pose upon economies and societies in the future. In particular, there is greater awareness of the contribution that transportation is making to the process. Button and Pels (2010; p101) estimated that all modes of transport account for 23% of global carbon dioxide emissions, with airlines contributing between 3% and 4% of global emissions. This is the case in spite of the fact that air travel is much more fuel efficient than any time in its history. However, as IATA (2011a) pointed out, the real issue is that airlines transport a much greater number of passengers nowadays so the absolute level of carbon emissions continues to rise.

Tyler (2013) outlined three key carbon emissions reduction goals that have been adopted by the aviation industry as a whole; improving fuel efficiency by an average of 1.5% annually until 2020, capping net emissions through carbon-neutral growth from 2020 onwards and cutting net emissions in half by 2050 from 2005 levels. These objectives place the aviation industry at the forefront of environmental responsibility.

### **EU Emissions Trading Scheme**

In response to the climate change challenge, the EU instituted an Emissions Trading Scheme ("ETS"), which was extended to cover all air travel to and from EU airports in 2012. For 2012, the emission cap was set at 97% of their 2004-2005 levels and was subsequently lowered to 95% in 2013, (Arjomandi and Seufert, 2014). This is a substantial cost for about one third of the global aviation industry and forces airlines to continue to improve their technical and environmental efficiency.

Norwegian Annual Report (2014) suggested that the ETS is a scheme that actually provides an effective incentive to reduce emissions since it applies to all carriers operating in the EU, whatever their nationality or point of origin. This can be contrasted with national and regional environmental

taxes, which are often based on passenger numbers or aircraft weight rather than actual emissions. Thus, they are not equally applied to all carriers and have the effect of distorting global competition.

### Carbon Tax in Norway

Norway has been a major proponent of adopting effective climate change policies. It was one of the first countries in the world to adopt a carbon tax in 1991, and currently boasts one of the highest levels of carbon taxation within the OECD in order to curb global warming (Sumner et al., 2009).

Moreover, while the EU aims to achieve a 20% reduction in carbon emissions by 2020 through the ETS, the Norwegian government is even more committed to reducing the impact of human-induced climate change as it has set a goal of carbon neutrality across all sectors of the economy by 2030 (Higham and Cohen, 2011).

## **Development of Biofuels**

One key area of focus within the aviation industry has been on the potential development of an alternative fuel that can be produced in sufficient quantities to sustainably supply the whole industry, reduce the industry's environmental footprint and be cost effective for airlines (Blakey et al., 2011). Norwegian Annual Report (2014) stated that biofuels produce substantially lower carbon emissions throughout its lifecycle, potentially up to an 80% reduction.

While other sectors have also looked into the prospect of biofuels, its application to airlines is complicated by the extreme conditions in which combustion must safely and reliability take place and the fact that it must be fully interchangeable with current jet fuel to reduce logistical difficulties. It would also be ideal if it could be "backwards compatible" in the sense that it can be applied to existing aircraft rather than simply new ones due to the long lifetimes of commercial aircraft (Blakey et al., 2011).

These factors limit the potential biofuels that are applicable for the airline industry. When Chuck and Donnelly (2014) tested nine potential biofuels, they found that only limonene fell within the required physical specifications to be fit for use in a commercial aircraft. This demonstrates the difficulties inherent in the search for a suitable alternative to the current jet fuel, because even if the product has the requisite chemical and flow characteristics suitable for an aircraft engine, it must be developed using very advanced processing techniques (Chuck and Donnelly, 2014). Therefore, while some types of fuels have been certified for commercial use in up to 50% blends with standard jet fuel, its use has not become widespread in the industry due to factors ranging from high production costs to the limited availability of suitable feedstock (Gegg et al., 2014). Sustainable aviation biofuel production dictates that it ought not to displace food crops and should not require deforestation.

### 4.1.6. PESTLE Analysis Summary

This PESTLE analysis has provided an in-depth look at the complex set of factors that affect the airline industry as a whole (see Figure 6). From the political and legal perspective, despite the deregulation of the industry since the late 1970's, it is still highly controlled when compared to most other industries. Restrictions remain in terms of foreign ownership, market access and the Open Skies concept has only been adopted by a couple of countries and regions around the world, with the vast majority of international aviation today still being regulated through bilateral air service agreements. Indeed, one of the main reasons why LCCs have struggled to replicate their success on long-haul routes is due to the fact that it is subject to a much more complex set of regulatory control and political considerations that are not as prevalent on short-haul routes, especially for those operating within the European "Open Aviation Area."

In terms of key economic factors, the industry is highly cyclical and correlated with changes in national and global economic conditions as much of the demand for air services is derived from other objectives. When times are tough, airlines struggle to generate positive cash flow due to issues relating to overcapacity and lack of revenue. The capacity issue is exacerbated by the industry's high capital cost structure, which means that airlines are incentivised to engage in aggressive price wars to maintain market share as long as fares remain above marginal cost. Price discrimination is another key feature of the industry. In recent times, the performance of LCCs have tended to be superior to legacy carriers, largely due to the fact that air travellers are becoming more price sensitive and willing to sacrifice non-essential services such as in-flight entertainment in exchange for lower fares.

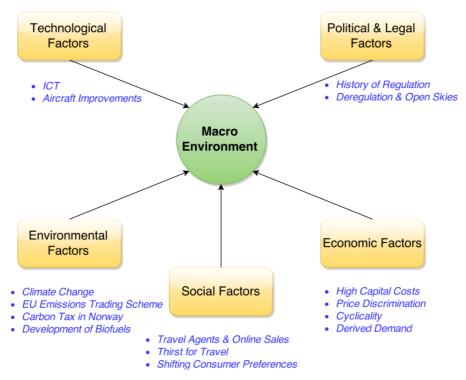
Social trends are also having an effect on industry structure. The advent and rise of the Internet has radically changed the way in which airlines market and distribute their products, and has undermined the traditionally important role that travel agents played in the distribution network. As people from all around the world continue to demonstrate a desire to travel further and wider, it has fundamentally changed the product offerings provided by airlines and opened up a market opportunity that LCCs have seized upon in the short-haul market. In the future, it will be interesting to see whether LCCs can prosper with their core business model along long-haul routes.

The operations of airlines are at the cutting edge of technology, whether it is the ICT that airlines use to manage every aspect of their business or the highly sophisticated aircrafts that they use to transport customers to their destinations. ICT plays a critical part in the entire value chain from identifying customer preferences, route management, ticket distribution, yield management to online check-in. Without it, airlines could not achieve the level of operational efficiency that they currently exhibit. In addition, the newer-generation aircraft that are being phased into the market are better than their predecessors in almost every aspect. They are more fuel efficient, quieter and offer

improved flight range and payload capacities. Therefore, since LCCs tend to possess more modern fleets, they have been able to gain a significant advantage over legacy carriers, which are encumbered by the necessity of flying older aircraft along many of their routes.

Finally, the aviation industry is acutely aware of the impact that it is having on climate change, and one of the key imperatives in recent times has been the desire to reduce the industry's overall carbon emissions. Two key measures include the ETS instituted within the EU and the Carbon Tax in Norway. In addition, the industry is putting a lot of time and resources into the development of a biofuel that can viably replace jet fuel as the primary source of fuel in the future.

Figure 6: PESTLE Summary



Source: Own Creation

# 4.2. Porter's Five Forces

While the PESTLE framework provides a good overview of the external factors affecting the airline industry, it does not adequately explain the underlying competitive forces that influence the level of industry profitability. As such, this section will use the Porter's Five Forces model to analyse the micro-dynamics of the industry and the key factors that will shape competitive strategy in the future. The framework breaks down the industry dynamics into five key factors; the threat of new entrants and substitute products or services, bargaining power of buyers and suppliers, and the rivalry amongst existing competitors (Porter, 2008). The bargaining power of buyers and suppliers can be viewed as sources of vertical competition while the other three factors are sources of horizontal competition (see Figure 7). By the end of this section, we hope to provide an

understanding of why the overall profitability of the aviation industry has consistently lagged behind other industries.

Figure 7: Porter's Five Forces Framework



Source: Own creation, adapted from Porter (2008)

# 4.2.1. Threat of New Entrants

Porter (2008) stated that new entrants have the potential to disrupt existing industry dynamics by adding capacity and capturing market share from existing firms. This intensifies competition by placing pressure on costs, prices and the level of investment required for firms to compete effectively. Hence, he argued that the threat of entry effectively places a limit on potential industry profitability and strengthens internal rivalry, especially in industries where entry barriers are low.

# **Customer Switching Costs**

As a general rule, airlines provide their customers with an undifferentiated product, as an economy class seat on Ryanair is not fundamentally different from one on Emirates or NAS. As such, the industry exhibits very low switching costs. Passengers can simply pick any airline that operates flights on the desired route. It is exactly this trait which made it relatively easy for LCCs to capture market share away from legacy airlines. However, low switching costs have not stopped airlines from embarking upon costly campaigns to differentiate their products or services through things such as in-flight entertainment, quality of food and on-board Wi-Fi.

Many airlines have also now implemented a frequent flyer program ("FFP") in order to offset the commodity nature of the product by motivating passengers to make repeat purchases with the same airline through rewards such as free flights and accommodation (Doganis, 2010). Ernst and Young (2014) stated that FFPs are powerful marketing tools that provide airlines with a host of value-added

information along with a recurring source of low volatility income that is critical in an industry with few switching barriers.

# **Incumbency Advantages Independent of Size**

This refers to the fact that incumbents may experience advantages, by virtue of their earlier entry into the market, which are not available to their competitors (Porter, 2008). One example of incumbency advantages is centred on the problem of congestion caused by the limited number of slots available for take-off and landing at major airports (Marketline, 2014). The limited availability makes it difficult for new entrants to penetrate the market as existing airlines tend to hold a monopoly over the prime slots at important hub airports leaving many new entrants being restricted to offering off-peak flights. Barrett (1989) criticised the way airports assigned their slots because it demonstrated a strong bias against new entrants while, at the same time, promoting collusion among existing airlines that want to maintain their slot numbers.

One way that LCCs have sought to overcome airport congestion is to fly to smaller, regional airports with significant excess capacity (Button, 2004). Alternatively, EasyJet and Air Asia have had airports built specifically for them in Amsterdam and Kuala Lumpur respectively.

### Supply-Side Economies of Scale

In the past, economies of scale were very important as legacy carriers enjoyed significant cost savings through their enhanced ability to place large aircraft orders and purchase fuel in bulk (Taneja, 2008a). Such advantages have dissipated over time as there has been a trend towards the leasing of aircraft. The benefits of leasing include reduced risk of technical obsolescence, access to more modern planes, greater operational flexibility, reduction in the initial capital expenditure and it acts as a hedge against inflation (Gibson, 2008). The main downside of leasing is that airlines lose the ability to recover the salvage value of its aircrafts. Mancilla (2009; p1) found that between 1980 and 2008, aircraft operating under lease increased by over 13% per year to the extent that, in 2008, 35% of the active international fleet was being leased.

One of the key developments in the aftermath of deregulation was that legacy carriers restructured their route networks towards the hub-and-spoke model (Button et al., 2007). The use of the model is not exclusive to the airline industry, as it is also commonly used in land transportation and postal services (Bryan and O'Kelly, 1999). The spokes feed traffic into the hub, which then distributes that traffic to destinations throughout the network. Gillen and Morrison (2005) stated that the benefit of this system on the demand side was that it allowed passengers to gain access to the broad network coverage provided by the large legacy carriers with the potential for frequent flights to a wide range of destinations. Gittell (2005) added that the consolidating effect inherent in the model makes it possible to justify more flights to cities within the network, thus allowing the carrier to gain

benefits from economies of density. Overall, she estimated that the economies resulting from this model have been able to generate 20% more revenue than comparable point-to-point routes.

Despite the economies offered by the hub-and-spoke structure, new entrants, especially LCCs, have been able to undercut the model by using point-to-point flights which require a simpler product and configuration of assets (Gittell, 2005). This allows them to have a lower cost base and gain market share by offering lower fares than legacy carriers utilising the hub-and-spoke system.

## **Capital Requirements**

There is a positive correlation between the size of the capital expenditure necessary and its ability to deter potential entrants (Porter, 2008). Due to the nature of the aviation industry, high fixed costs must be incurred at the entry stage before a company is allowed to operate a commercial flight. These costs include air carrier permits, investment in a fleet of aircraft and airport slows. Hence, this operates as a significant barrier to entry.

# 4.2.2. Threat of substitutes

Besanko et al. (2013) argued that the effect of substitutes is similar to that of a new entrant as it erodes the profitability of existing firms by taking market share away. Within the airline industry, there are two main areas which offer travellers a viable alternative to flying; high-speed rail ("HSR") and videoconferencing.

## High Speed Rail

As HSR networks in Europe and Asia continue to develop and expand, it has the potential to provide consumers with a strong, lower-carbon substitute for short-haul air travel (Clewlow et al., 2014). When GAO (2009) examined the impact of HSR on the demand for air travel, it concluded that HSR tends to attract consumers along dense, highly-populated, high-yield corridors. Therefore, it may become very difficult for airlines to compete effectively on the routes for distances less than 500km in the future.

However, when investigating the potential competition between HSR and low-cost air travel in the European market, Finger et al. (2014) concluded that it was difficult to consider the two as competing modes of transportation due to the fact that LCCs mostly operate from regional airports and lack a significant presence in major cities linked by HSR.

Moreover, the degree to which HSR may represent a viable substitute depends on the geography of the region in question. For example, the topography of Norway dictates that the construction of a HSR network needs to be suspended or built into the terrain, which would require deep cuttings, fillings and tunnels into the side of mountains (Norwegian Annual Report, 2013). Therefore, it is unlikely that HSR would represent a potential substitute for air travel in the near future due to the

logistical difficulties associated with any proposed construction plan. In addition, the route between Oslo and Bergen, the most frequently flown route in Norway, crosses a large number of designated nature reserves and presents obstacles with regards to environmental conservation (Norwegian Annual Report, 2013).

Finally, the relative short routes where HSR excels represent only a small proportion of the civil aviation market. For medium and long-haul flights, there is no immediate threat of substitutes due to the large distances involved, the relative speed of air travel compared to ground transportation, and geographical factors associated with land border crossings and visa requirements. In fact, it is arguable that the reverse situation has been occurring as more people are choosing to travel by air than any other means of transportations. Between 1995 and 2012, the number of tourists travelling by air to their final destination increased from 45% to 58% (Airbus, 2014; p21).

### **Videoconferencing**

Porter (2008) states that videoconferencing can be a substitute for all forms of travel, not just air travel. The main reasons for adopting this form of communication include time savings, reduction in travel costs and increased efficiency of decision making (Denstadli, 2004).

When looking at the impact on business travel within the Norwegian market, Denstadli (2004) found that videoconferencing had a limited impact, with a substitution effect of between 2.5% and 3.5%. One of the reasons that he proposed was that videoconferencing is used primarily for intracompany communications rather than for meeting with external clients or suppliers. This reflects the fact that videoconferencing is an imperfect substitute for face-to-face communication, which is still perceived as the most effective way of conducting business as it provides a platform for the building of more personal and authentic relationships. Thus, Oxford Economics (2010) has concluded that videoconferencing will likely supplement, rather than supplant, business travel.

# 4.2.3. Bargaining Power of Suppliers

In industries characterised by the presence of powerful suppliers, those suppliers are able to charge exorbitant prices and limit the profit margins available to firms at other points along the supply chain (Porter, 2008).

#### Aircraft Manufacturers

Since Lockheed exited the market and Boeing's acquisition of McDonnel Douglas in 1997, Boeing and Airbus have effectively operated as a duopoly in the supply of new jetliners (Marketline, 2014). The highly concentrated nature of the aircraft manufacturer industry, when combined with the irreplaceable nature of the role that they perform in the supply chain, has created a dependency and provides both companies with significant source of power (Crook and Combs, 2007). This problem

is compounded by the complexity and high-technology context of the aircraft manufacturing process, which acts as a significant deterrent for prospective entrants.

Even if other companies attempted to enter the market, there are several factors working against them. Firstly, reliability and safety are two absolutely critical factors for airlines and it would take many years before a new entrant is able to build up the necessary level of trust and market acceptance (Marketline, 2014). Secondly, one of the key strategic drivers for LCCs has been their desire to minimise the number of different models of aircraft in their fleet in order to reduce maintenance costs (Button, 2004). To completely switch from one of the established aircraft manufacturers to a new entrant would run counter to this strategy. Finally, there are significant financial implications if an airline was to break the contracts that they have already entered into for the purchase or lease of aircraft. With the intense competition for new aircraft and the long lead times inherent in the industry, airlines tend to enter into these agreements well ahead of the anticipated delivery date, thereby creating significant switching costs (Marketline, 2014).

## **Airports**

The major international airports around the world typically exhibit features consistent with that of a local monopoly as they face limited competition from secondary airports (IATA, 2011a). Their source of market power is derived from the finite number of slots available at the key hubs and the high switching costs associated with changing airports, especially when it is an important link in a hub-and-spoke network configuration. The magnitude of these switching costs is proportionate with the size of an airline's presence at that particular airport. Therefore, legacy airlines which use these airports as hubs in their network can be considered "captive customers" and are reticent to relocate (Polk and Bilotkach, 2013).

#### Labour

The airline industry is labour intensive with numerous employees required for the efficient functioning of an airline including engineers, pilots, cabin crew, check-in staff and ground personnel. Labour's share as a percentage of operating costs varies from less than 15% in the Asia-Pacific to 25% in Europe (IATA, 2010a; p1)

One of the main sources of their power comes from the fact that there are no substitutes for several classes of employees such as pilots and mechanics (Porter, 2008). Therefore, the threat of a strike from those employees can effectively ground an airline's entire operations and provides them with the bargaining power to capture considerable profit. Based on a study by Hirsch (2007; p2), it was found that airline employees were paid a 15.4% premium than comparable workers in other industries, with pilots earning the highest premium of 24.5%.

#### **Fuel**

Fuel represents another input necessary for the operation of commercial aircraft. Since there are a relatively limited number of companies supplying aviation fuel, they have considerable power to drive up prices (Marketline, 2014). In 2014, fuel accounted for 29% of operating expenses (IATA, 2014a; p1). Airbus (2014) stated that it is a well-established fact within the industry that forecasting the oil price is extremely difficult, with most short-term forecasts proving to be wrong. As a result, airlines aim to mitigate some of the supplier power through the use of complex hedging strategies. This is especially important in the long-haul market, where fuel represents an even larger component of operating costs when compared to short-haul operations (Morrell, 2008). Indeed, the collapse of two low-cost long-haul carriers in 2008, Zoom Airlines and Oasis Airlines, were directly attributable to the soaring fuel price which compromised their capability to cut costs sufficiently to maintain a profitable long-haul operation (Gray, 2009; Taylor, 2008). It was also one of the main reasons for Air Asia X ceasing long-haul operations from Asia to its European destinations (Godvindasamy, 2012).

## 4.2.4. Bargaining Power of Buyers

When an industry has powerful consumers, it will drive prices down and squeeze the profitability away from firms further upstream (Porter, 2008). Within the airline industry, the consumers can be broken down into two main groups; leisure travellers and business travellers.

#### Leisure Travellers

Porter (2008) asserted that one way customer groups can derive power is if there are few buyers in the market and they have the capacity to buy large volumes. That is not the case in the airline industry as traffic volume surpassed 3.3 billion in 2014 (IATA, 2014a; p1). When viewed in this context, each individual passenger has no bargaining power whatsoever as the impact of one passenger switching to another airline is negligible. Instead, their bargaining power is derived from their high price sensitivity and low switching costs (Marketline, 2014). Air travel is ultimately a discretionary good for the vast majority of travellers and they can simply opt not to travel if fares are too high.

The development of the Internet as an important source of information, allowing consumers to compare prices across a wide range of airlines before deciding to purchase a ticket has increased the level of price competition within the industry and partially explains the ability of LLCs to gain market share away from legacy airlines (Marketline, 2014).

Nevertheless, within the leisure market, discrepancies still exist. Older travellers tend to have higher disposable incomes and higher service expectations while younger travellers tend to view price as the most critical factor and are willing to sacrifice traditional services in exchange for low fares (Oxford Economics, 2010).

## **Business Travellers**

While the number of leisure travellers far exceeds those that travel for corporate purposes, business travellers represent a disproportionate source of profit for airlines due to their ability and willingness to pay large premiums for business and first class cabins that provide better quality food and beverages, flat sleeper beds and more personalised service (CAPA, 2015c).

The purchasing power of business travellers puts them in a strong bargaining position as they provide airlines with a predictable source of large revenue, as many are locked into long-term contractual agreements. In order to attract these highly profitable customers, airlines must tailor their product proposition towards the demands of business travellers, who place much greater emphasis on punctuality, route frequency, unrestricted fares, seat and cabin comfort, check-in facilities and FFPs (Israel, 2014b).

# 4.2.5. Rivalry among Competitors

Porter (2008) explained that, in industries with high internal rivalry, it limits the overall profitability of all firms in that industry. The extent of the effect depends upon the intensity of the competition and the basis upon which they are competing.

### **Capacity**

Besanko et al. (2013) outlined the relationship between capacity and pricing; at full capacity, airlines have no incentive to cut prices as they would simply eat into their own profit margin, but when there is excess capacity, they ought to cut prices as long as they remain above marginal cost. Therefore, when variable costs are only a smaller proportion of the total cost base, as is the case in the airline industry, prices can fall very dramatically as competitors seek to protect market share. The commoditised nature of the product exacerbates the potential for aggressive and ongoing price wars to the detriment of all competitors (Porter, 2008).

Due to the inefficiencies inherent in the industry and the fact that governments have shown a disinclination to let airlines fail, capacity is rarely at equilibrium. Other factors contributing to the constant state of disequilibrium include the fact that reductions can only occur in bulk, as capacity is reduced by aircraft rather than by seat, the risk of large capital losses if aircraft are sold during downturns and airport slots are usually agreed for a certain period of time, which creates exit barriers from routes and has the potential to have ripple-on effect on the economics of the whole network for hub-and-spoke operators (IATA, 2011a). On the flip side, it is comparatively easy to add capacity

during periods of high growth due to an active market for used planes and the possibility of entering into leasing agreements.

## **High Exit Barriers**

The easiest way to remove excess capacity is for poorly performing firms to leave the market. However, despite the low profitability in the industry, less than 1% of airlines exit the market in any given year (IATA, 2011a; p34). One of the reasons is the ease with which airlines can maintain capacity by redeploying assets and resources to different geographic areas in the hopes of gaining market share.

Another reason is derived from the large capital investments required to enter the industry. After a firm makes that sort of investment, it is motivated to stay in the market for as long as is rationally possible. This situation is compounded by the fact that airlines are often committed to scheduled flights many months in advance as vital inputs such as fuel, crew, gates and airport slots have already been allocated (Button and Pels, 2010). Therefore, the industry's low marginal cost structure makes it feasible for unprofitable airlines to remain in the industry for many years (IATA, 2011a).

In addition, even in the event of bankruptcy, capacity is not automatically reduced as some countries, such as the U.S., permit bankrupt carriers to continue to operate as a going concern despite their insolvent state (Wojahn, 2012).

# 4.2.6. Porter's Five Forces Summary

While the threat of substitutes is low, particularly in the long-haul market, low switching costs, limited incumbency advantages and the diminishing importance of economies of scale mean that there are relatively few barriers to entry apart from the large initial capital expenditure required. With both buyers and suppliers exhibiting significant bargaining power along the vertical value chain and extremely high internal rivalry caused by excess capacity and high exit barriers, it is unsurprising that the airline industry has the lowest average return on invested capital ("ROIC") from the list of selected industries that is included in the analysis by Porter (2008). The average ROIC for airlines was a mere 6.9% between 1992 and 2006, well below the average industry ROIC of 14.9% and the top performing sectors, which had an average ROIC above 40%.

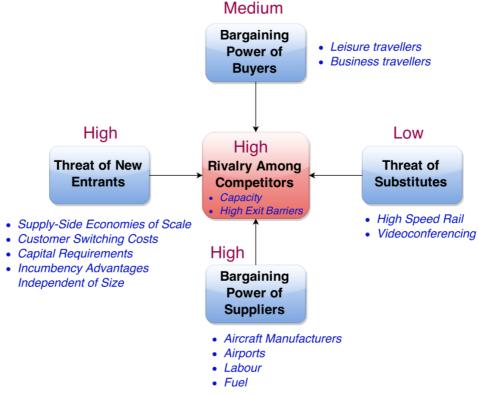
However, that is not to say that all airlines suffer from poor profitability as there is a wide divergence in the operational performance throughout the industry. In a study of the world's 85 largest airlines, who together accounted for 85% of global passenger traffic, IATA (2006) found that eight airlines generated operating profits in excess of \$500 million while twenty made operating losses, with nine of those suffering losses of more than \$100 million. Although that study did not find any significant correlation between size and profitability, Pearce (2013; p16) found that the

ROIC was consistently higher for LCCs than legacy carriers in all regions, with the largest disparity evident in Europe where the ROIC of LCCs was 7.6% compared to just 3.6% for legacy carriers.

Moreover, it should be recognised that suppliers and other industries involved in the aviation value chain have been able to generate positive ROIC, sometimes well above industry norms, with the highest returns been generated by travel agents who have a ROIC of 44% (Pearce, 2013; p19). Monopoly elements along the value chain have had a distorting effect whereby airlines are in the unenviable position of generating the lowest returns while assuming a disproportionate amount of the risk (Button, 2004). This has created the paradoxical situation whereby air transport continues to generate enormous value for passengers and others along the value chain but simultaneously destroys value for its investors (Pearce, 2013).

Nevertheless, entrepreneurs are still attracted to the industry because of the potential for large profits and the industry's glamorous image. Over the last 40 years, more than 1300 airlines have been established, only a fraction of whom are still in operation (IATA, 2011a; p2). Figure 8 provides a graphical look at the impact that the Five Forces have on the profitability of the industry.

Figure 8: Porter's Five Forces Summary



Source: Own Creation

## 5. Internal Analysis of Norwegian Air Shuttle ASA

In order to conduct the comprehensive strategic analysis intended, we must also include an internal analysis of NAS to supplement the external analysis in the previous chapter. The resource-based view of organisational performance is a leading perspective within international business which hypothesises that the performance of individual firms is primarily driven by the differences in the resources and capabilities that each firm possesses (Peng, 2010).

As such, this chapter will conduct a thorough analysis of NAS by examining the airline's history and corporate governance structure, its financial performance, key operational issues, a SWOT analysis to determine the company's major strengths, weaknesses, opportunities and threats, and a VRIO analysis that assesses the four interconnected factors of value, rarity, imitability and organisational aspects of NAS' resources and capabilities to determine if they provide the necessary platform for the company to build a sustainable advantage both in the short-haul market within Europe as well as its long-haul operations to North America and Asia (see Figure 9).

By conducting this internal analysis, it will assist us to answer the second research question of whether NAS possesses the necessary internal resources and capabilities to become a successful player in the long-haul market, and the ways in which the company has leveraged its key resources and capabilities to adjust the existing business model to better meet the challenges that it faces in its long-haul operations.

Literature Review

External Analysis

Internal Analysis

Theoretical Background

PESTLE Porter's Five Forces

SWOT VRIO

Strategic Analysis

Recommendations

Figure 9: Internal Analysis

Source: Own Creation

## 5.1. Airline History / Overview

Founded on the 22<sup>nd</sup> of January, 1993, NAS has grown rapidly to become the 3<sup>rd</sup> largest budget carrier in Europe and the 2<sup>nd</sup> largest airline in Scandinavia, behind only SAS. Today, NAS employs 4500 employees, operates 424 routes to 130 destinations across four continents and carried over 24 million passengers in 2014. This sections aims to give a brief outline of the company's history and how it has managed to achieve its current market position.

Please note that all the information in this section is sourced from NAS' official website (www.norwegian.com)

### 5.1.1. Early Developments

During the formative stages of NAS' business, it operated in close cooperation with another LCC, Braathens S.A.F.E. At that time, Braathens was the largest domestic airline in Norway. The relationship with Braathens lasted until 2002, when SAS purchased Braathens and terminated all contracts with NAS. Subsequently, NAS became completely independent and began the process of implementing its low-cost strategy to become a full-fledged competitor to SAS in the Scandinavian market. The company listed on the Oslo Stock Exchange in 2003 to fund its expansion plans. During the IPO, over 250 million NOK was raised.

In 2004, NAS entered into a code-sharing agreement with two other small discount carriers in the Norwegian market, FlyNordic and Sterling to expand NAS' route network from Norway to the rest of Europe.

#### 5.1.2. Fleet Expansion

At its inception, NAS operated a small fleet of only three Fokker F-50 aircraft, which had previously belonged to a subsidiary of Braathens. The company continued to operate with F-50's until late 2002, when it purchased seven Boeing 737-300 aircraft. This represented the first step in an aggressive expansion of its fleet size.

In 2007, NAS reached agreement with Boeing to purchase forty-two 737-800 aircraft. At the time, it was the largest order ever placed by a Scandinavian airline. The upgrade allowed NAS to achieve two of its main objectives; becoming more efficient while also being more environmentally friendly. The 737-800 was expected to reduce emissions and fuel consumption by more than 20% and increase the passenger capacity from 148 to 189.

NAS laid the foundations for its long-haul expansion by entering into an agreement with Boeing for the purchase of 3 Dreamliners and the lease of one more in 2011. At the beginning of 2012, NAS ordered 222 aircraft from both Boeing and Airbus; 100 Boeing 737 MAX8, 22 Boeing 737-800 and

100 Airbus A320neo. That order set the record for the largest ever single aircraft order by an European airline.

With an average age of just four years, NAS' 98-strong fleet is one of the youngest in Europe, and operates over 600 flights on a daily basis. Table 2 provides an overview of NAS' existing fleet, its outstanding orders and the capacity of each type of aircraft.

Table 2: Fleet of NAS

Type of plane	Boeing 737- 800	Boeing 737-300	Boeing 787-8 Dreamliner	Boeing 737 Max 8	Airbus A320neo
Number	85	5	8	0	0
On Order	44, with option of 6 more	148	9	100, with option of 100 more	100, with option of 50 more
Passengers	186/189	148	291 (32 in Premium Economy and 259 in Economy)	186	168

Source: Own creation, based on NAS official website

#### 5.1.3. Route Network Extension

NAS started from humble beginnings as a regional airline providing a limited number of services to regional destinations along the west coast of Norway. Over time, NAS expanded its network across Norway, before expanding its network to Sweden and Denmark.

It was during 2006 that the company started to expand beyond Scandinavia. It established a Polish base and subsidiary that operated flights from Warsaw to five European cities. After acquiring FlyNordic from Finnair in 2007, Stockholm was established as the company's Swedish base. NAS added Rygge and Copenhagen to its collection of bases in Scandinavia and Dubai became the company's first destination outside of Europe in 2008.

By 2011, NAS started international flights from Gothenburg in Sweden and opened a new base in Helsinki. With bases in Sweden, Finland, Denmark and Norway, NAS established itself as a serious competitor to SAS in the Scandinavian market.

2013 was a landmark year for NAS' future strategic direction. The company took delivery of its first three Dreamliners. Five more arrived in 2014. It has nine more Dreamliners on order for its long-haul operations. With these new long-range aircraft, NAS launched its long-haul routes from its Scandinavian bases to Fort Lauderdale, New York and Bangkok. Bangkok also became the company's first base outside Europe.

In February 2014, NAS was granted an Irish Air Operator's Certificate for its subsidiary, Norwegian Air International Ltd. NAS also opened its first bases in the U.S.; in New York and Fort Lauderdale, and commenced flights from London Gatwick to these U.S. bases. In total, NAS

currently has 17 operational bases; six in Spain, five in Norway, two in the U.S. and one in the UK, Sweden, Denmark, Finland and Thailand.

## 5.1.4. Other Notable Developments

In addition to its core business, NAS has also established other complimentary businesses. Bank Norwegian provides full scale online banking services while Norwegian Reward provides NAS customers with a FFP that is not commonly found amongst other LCCs. Both were established during 2007.

In 2008, a major product innovation in the form of Call Norwegian was introduced. It is a mobile phone subsidiary which offers in-flight mobile phone and wireless Internet services on NAS flights. This innovation allowed NAS to become the first European airline to offer high-speed inflight Wi-Fi services in 2011. This service still differentiates NAS from most other airlines as demonstrated by the fact that it has won the Passenger Choice Award for Best In-Flight Connectivity every year since 2012.

One distinctive feature of NAS planes is their livery of a white exterior with a red nose, along with portraits of individual Scandinavian heroes on the tail. This practice began with the image of Norwegian actor, Erik Bye, in 2009 and was subsequently extended to include Swedish and Danish heroes in 2010. This development reflects the shift from NAS being an exclusively Norwegian company to one that proudly represents the whole Nordic region.

# 5.1.5. Profitability

Given that most airlines struggle to generate sustainable profits, it comes as no surprise that NAS was mired in losses for many years after its inception. It was not until 2005 that the company recorded its first profitable year. Between 2007 and 2013, NAS was able to post profits every year, with a record profit of 446 million NOK after tax in 2009. Due to the large capital expenditure incurred for the purchase of new aircraft, NAS suffered an annual loss exceeding 1.05 billion NOK in 2014. The recent financial performance of NAS is discussed in more detail in financial analysis section below.

# 5.1.6. Corporate Structure

Norwegian Air Shuttle ASA is the parent company of the Norwegian Group. The Group owns and operates subsidiaries in Norway, Ireland, Sweden, Denmark, Finland and Singapore. The operations are divided into a few sub-groups, the main one being commercial airline group (see Figure 10). The commercial airline activities of NAS are performed by the parent company Norwegian Air Shuttle ASA and its subsidiaries. Norwegian Long Haul AS is a subsidiary that operates long-haul flights, Norwegian Air Norway AS is in charge of the operations from the

Scandinavian bases, and Norwegian Air Shuttle ASA flies from the European bases. The asset group's subsidiaries are located in Ireland and they deal with aircraft ownership and lease. NAS also has a resource group that consists of fully-owned subsidiaries in some countries, which provide permanent local employment for its pilots. Finally, NAS also has interests in other business areas through the establishment of subsidiaries involved in the promotion of the NAS brand, Norwegian Cargo and an interest in Bank Norwegian.

The current structure of NAS is a result of a reorganisation of the company that took place in 2014. According to the company, the main goal of the new structure was to provide a platform for continued growth and entering new markets, while maintaining the company's flexibility and adaptability. A clear separation of its business areas improves the ability of the company to respond quickly to shifting market dynamics. It also structured the operations, with each separate entity having its own, clear responsibilities.

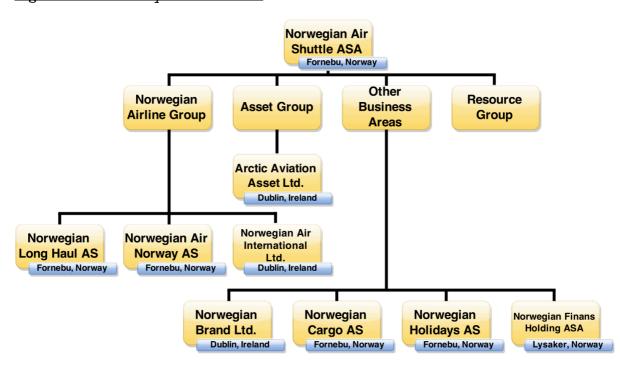


Figure 10: NAS Corporate Structure

Source: Own Creation based on NAS' official website

#### 5.1.7. Ownership Structure

The company has been listed on the Oslo Stock Exchange since December 2003 and currently has over 35 million shares outstanding, held by almost 8500 institutional and private investors. Neither the Norwegian government nor NAS hold any shares in the company.

78.5% of shares are held by Norwegian investors with the rest coming from around the world, largely from the UK, Sweden, Finland and Luxembourg (Figure 11). The company has a highly diversified ownership structure with the largest shareholder being HBK Invest AS., with 27%, and

no other shareholder owning more than 7% of shares (Figure 12). Diversification in ownership mitigates the risk that any one, controlling shareholder will be able to assert undue influence over the Board or management to make decisions in their personal interest, to the detriment of minority shareholders (Mallin, 2010).

In addition, NAS has only one class of shares and there are no restrictions on the trading of the company's shares. Having homogenous share types means that the interests of all shareholders are properly aligned and they all have the same power and ability to obtain information (Mallin, 2010).

Ownership by country

Norway 79,3%
United Kingdom 10,9%
Luxembourg 2,6%
Belgium 1,8%
Sweden 1,8%
United States 1,5%
Denmark 1,3%
Switzerland 0,4%
Iceland 0,1%
France 0,1%
Other 0,2%

Figure 11: Share Ownership by Country

Source: Own creation, based on data from NAS Official Website

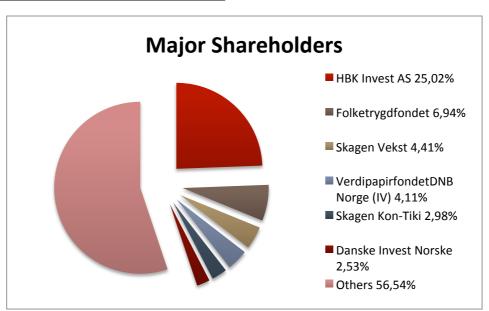


Figure 12: NAS Shareholder Distribution

Source: Own Creation, based on data from NAS Official Website

### 5.1.8. Board of Directors

The Board of Directors play a critical role in connecting the management at NAS with shareholders. Its main roles include monitoring management, deciding upon the level of executive compensation, divided policy and advising on key strategic decisions (Mallin, 2010).

NAS utilises a unitary Board structure, currently comprised of 6 members following the resignation of Benedicte Fasmer in January, 2015. The Chairman is Bjørn Kise, who has extensive legal experience and represents NAS' largest shareholder, HBK Invest. The other five Board members are independent directors, three of whom are employee representatives. They all possess extensive knowledge from either the aviation sector or other consumer sectors, have relevant network connections, and professional experience in the areas of finance, capital markets and marketing.

The fact that neither the CEO nor any other member of management sits on the Board is positive as it removes the potential for conflict of interest to arise, and ensures that there is a clear separation of responsibility between management and the Board (Mallin, 2010).

#### 5.1.9. Awards

As a result of the company's strong corporate governance, innovative products and commitment to high levels of service, NAS has been bestowed with many internationally recognised awards in the last five years. In 2009, the company received the Market Leadership Award from Air Transport World, which is given to airlines that "have developed or entered new markets and/or innovative business strategies that have grown their networks, revenues, customer base and/or brand recognition" (ATW Online, 2015).

In addition, SkyTrax named NAS as the "Best European Low-Cost Carrier" in 2013, an achievement that it repeated a year later. The company won a host of other prestigious international awards in 2014 including Best Airline in Europe from Passenger Choice Awards, Europe's Best Low-Cost Airline from Airlineratings.com, and Best Low-Cost Airline in the World from Air Transport News. These awards vindicate the company's strong operational and financial performance and provide NAS with a good platform for continued growth as it expands its services beyond Europe.

### 5.1.10. Summary

This section has highlighted the company's rapid expansion from its humble beginnings in 1993. It has gradually increased the size of its route network over time, placed the largest aircraft order in European history, established a long-haul subsidiary in Ireland, grown the scope of its business operations and has consistently generated profits well above industry norms in the last decade. NAS provides an excellent model for how to build a successful LCC in today's aviation market. The

company's strategic vision, strong corporate governance and innovative capacity have been recognised by the various awards that it has received in recent years. Figure 13 summarises the major developments in NAS' history in the form of a timeline.

Figure 13: Timeline of Major Developments in History of NAS

1993	Norwegian Air Shuttle ASA established
2003	Listed on Oslo Stock Exchange
2005	First profitable year
2006	Established first non-Scandinavian base in Poland
2007	Bank Norwegian and Norwegian Reward established
2008	Dubai became first destination outisde of Europe
2009	Record profit of 446 million NOK
2011	In-Flight Wifi Introduced
2012	Largest aircraft order by European airline
2013	Commencement of long-haul operations; Norwegian Cargo established
2014	4500 employees, 424 routes, 130 destinations, 24 million passengers

Source: Own Creation, based upon information from NAS official website

# 5.2. Financial Analysis

In this section, NAS' financial and operational performance over the last 5 years will be carefully examined. An analysis of the key figures of NAS' balance sheets will be conducted in order to obtain a full picture of the company's financial performance during this period. In addition, NAS' key financial ratios and metrics will be calculated and then benchmarked against a peer group of rival airlines. The peer comparison will provide us with a better understanding of how NAS is performing when compared to some of its main competitors.

# 5.2.1. Financial performance

Table 3 provides an overview of NAS' financial performance in recent years. It shows that NAS has been able to increase passenger numbers and operating revenues every year since 2010. This has coincided with the company's expansion of its route network and fleet size, which resulted in a significant growth in capacity.

(Million Euros)	2014	2013	2012	2011	2010
Operating Revenue	2338	1995	1719	1351	1073
change %	17%	16%	27%	26%	-85%
Total operating expenses	2507	1871	1665	1297	1047
change %	34%	12%	28%	24%	-84%
Operating result (EBIT)	-169	124	54	53	26
change %	-236%	130%	1%	104%	-95%
Net profit/loss	-126	41	61	16	24
change %	-408%	-33%	291%	-34%	-95%
Current ratio	47%	74%	60%	63%	83%
Equity ratio	9%	19%	20%	22%	27%
Net profit margin	-5.4%	2.0%	3.6%	1.2%	2.2%
Passengers (Million)	23.98	20.7	17.7	15.7	13

Source: Own creation, based upon data from NAS Annual Reports 2010-2014

Despite the sustained growth in revenues, the company has seen its net profit fluctuate during this period, culminating in a loss of €126 million in 2014. The trend started in 2013 when NAS' profits decreased by 33%. The main reasons behind it were rapid capacity expansion, launch of the long-haul routes, delays in the delivery of the new Boeing Dreamliners, and reliability issues when the Dreamliners were finally delivered, all of which led to a sharp increase in operational expenses in 2014, as depicted in Figure 14. These operational issues were exacerbated by a large depreciation of the NOK in the fourth quarter of 2014 and a loss of 500 million NOK resulting from its fuel hedging strategies.

2700 2500 2300 2100 **Operating Revenue** 1900 1700 Total operating 1500 expenses 1300 1100 900 2010 2011 2012 2013 2014

Figure 14: Summary of Operating Revenues and Expenses (2010-2014)

Source: Own Creation, based on data from Norwegian Annual Reports 2010-14

Therefore, while the company's performance in the five years has been impressive, 2014 marked the first year that NAS has suffered an operating loss since 2005. This is a result that the company is keen to avoid in 2015, and an improvement in the performance of long-haul operations will go a long way towards achieving this goal.

# 5.2.2. Peer Group

In order to analyse the performance of NAS, we have chosen a peer group that consists of comparable airlines. In the following section, we are going to benchmark their performance metrics with those achieved by NAS. In the process of choosing these airlines, we tried to find companies whose business models are most similar to that of NAS. All of the airlines chosen have traits prevalent in the low-cost strategy. With the exception of Air Berlin, the airlines in the peer group are independent entities, unaffiliated with any of the legacy airlines. However, there are some differences in the geographic area of the destinations served as well as lengths of the flight connections.

NAS' route strategy can be described as "hybrid" in the sense that the company operates short, medium and long-haul flights. It is an European airline whose main market remains Scandinavia. As such, a similar company is Air Berlin, which is also a "hybrid" airline focused mainly on European market while also serving long-haul destinations in North America, Asia and Africa. Another interesting example is Air Asia X, which is a LCC that provides medium and long-haul flights in the Asia-Pacific. Air Asia X is a particularly interesting company from the perspective of NAS, as it operated long-haul routes to Paris and London from Kuala Lumpur between 2009 and 2012, before making the decision to discontinue those services due to a range of operational factors such as high fuel costs, high taxes and weak demand due to the after effects of the Global Financial Crisis (Yahoo, 2012). Finally, Ryanair and EasyJet are chosen because they are the two largest LCCs in the European market, directly competing with NAS on many short-haul routes.

Since the main focus of this thesis is on the viability of the low-cost model in the long-haul market, we believe that establishing a peer group consisting of LCCs with different route strategies is the most accurate way to picture the differences coming from these strategies. A quick overview of the peer group is shown in Table 4.

Table 4: Overview of Peer Group

Factor	Ryanair	<u>EasyJet</u>	Air Berlin	Air Asia X
Home Country	Ireland	The UK	Germany	Malaysia
Founded	1985	1995	1978	2007
Route Structure	Short-haul	Short- to medium- haul	Short-, medium- and long-	Medium- and
			haul	long-haul
Pricing Strategy	Lowest fares on	Value-for-money, not	Value-for-money, not	Lowest fares
	every route	necessarily the lowest fares	necessarily the lowest fares	on every route
Network Strategy	Rapid network	Network density	Network density	Rapid network
	expansion			expansion
Strategic Alliance	Independent	Independent	OneWorld	Independent
Passengers (2014)	81 million	64.8 million	31.7 million	4 million
2014 Profit before	€591.4	€720.5	- €376.7	- €139
tax (million)				

Source: Own Creation, using information from airline websites and annual reports

Since the airlines chosen for the comparison group are registered in different countries, their financial data is denominated in different currencies; Euros for Ryanair and Air Berlin, Malaysian

Ringgit for Air Asia X, British Pounds for EasyJet and NOK for NAS. In order to provide a clear picture of their performance, we decided to express all the figures in a common currency – Euros. The conversion rates are shown in Table 5; using the yearly average exchange rates.

Table 5: Foreign Exchange Conversion Rates (2010-2014)

	2014	2013	2012	2011	2010
EUR/NOK	8,3581	7,8084	7,4799	7,798	8,0117
EUR/GBP	0,8064	0,8491	0,8113	0,868	0,8586
EUR/MYR	4,347	4,1843	3,9693	4,2568	4,277
EUR/USD	1,3291	1,3281	1,2859	1,3926	1,3277

Source: Own Creation

### 5.2.3. Financial Ratio Analysis

In order to measure the airlines' financial stability, we decided to use three popular financial ratios; equity ratio, current ratio and net profit margin. Equity ratio is used to determine the stability of a company's capital structure, calculated by dividing total shareholders' equity by the total assets of the company (Gibson, 2009). It provides an overview of what percentage of the total assets is actually held by the shareholders. As a general rule, a higher equity ratio is more preferable because it indicates a healthier long-term position and the lower interest payments mean that more free cash flow can be generated and used to finance growth or to pay out dividends.

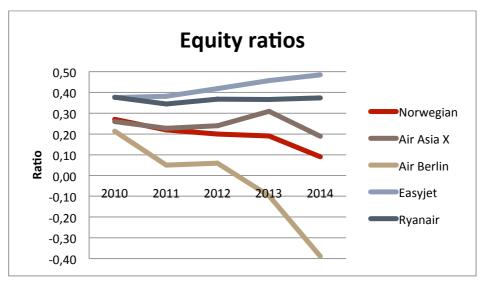
The current ratio indicates a company's ability to repay its short-term liabilities, computed as a ratio of current assets divided by current liabilities (Gibson, 2009). When this ratio is below one, it means that the company cannot meet its short-term obligations as they fall due. Hence, having a low current ratio may cause short-term liquidity issues and financial distress.

The third financial ratio is net profit margin, which provides an indicator of a company's profitability, expressed as a ratio of net profit and the revenues of the company (Gibson, 2009). Thus, it tells us what part of the generated income stays within the company.

#### **Equity Ratio Comparison**

As we can observe from Figure 15, Air Berlin's equity ratio has historically been the lowest and since 2013, it has been negative due to very high amount of retained earnings that result in negative shareholder's equity. EasyJet's equity ratio, on the other hand, has been constantly growing since 2012 and has now reached the level of just below 0.5. When compared to its peer group, NAS' equity ratio is the second lowest and has declined from 0.27 in 2010 to 0.09 in 2014. This reflects the aftereffects of the company's use of debt to finance the largest aircraft purchase in European history in 2012. While a low ratio is not a problem, in and of itself, it will mean that NAS will be saddled with high debt repayments in the foreseeable future and negatively affect the profitability of the company.

Figure 15: Equity Ratios for Sample Airlines (2010-2014)



Source: Own Creation, based upon data from airline annual reports (2010-2014)

# **Current Ratio Comparison**

Figure 16 illustrates the development of the current ratio of the peer group. Unfortunately, for Air Asia X, we only found data to compute the current ratio from 2012 onwards, which prevents us from examining its ratio for the earlier years. Between 2012 and 2014, Air Asia X consistently obtained the lowest ratio of all the peers. Last year it was just over 0.2. NAS' current ratio has been slightly higher, maintaining a level in the range of 0.6 and 0.83 between 2010 and 2013. In 2014, however, it dropped just under 0.5. Ryanair, whose current ratio has never dropped below the level of 1.5, has obtained by far the highest result. The implication is that, in the event of an unexpected downturn in demand, Ryanair will be in the best position to continue to repay its financial obligations while other airlines such as Air Asia X and NAS may struggle to do so.

**Current ratios** 2,50 2,00 Norwegian Air Asia X 1,50 Air Berlin 1,00 Easyjet 0,50 Ryanair 0.00 2010 2012 2011 2013 2014

Figure 16: Current Ratios for Sample Airlines (2010-2014)

Source: Own Creation, based upon data from airline annual reports (2010-2014)

# Net Profit Margin

Figure 17 shows that Ryanair has consistently generated the strongest profit margins between 2010 and 2014. It has maintained a net profit margin of between 10.7% and 11.7%. EasyJet's margin had been slowly growing between 2010 and 2013, from 6.1% to 7.1%. Last year, however, its net profit margin jumped up to 10.8%, which was the best result out of all the airlines in the sample, slightly above Ryanair. NAS was a stable performer between 2010 and 2013, with net profit margins of between 1.2% and 3.6%. However, NAS saw its net profit margin slump to -5.4% in 2014 as a result of the operational issues discussed in section 5.2.1. Nevertheless, NAS still outperformed Air Asia X and Air Berlin, both of whom have had negative net profit margins in the past two years.

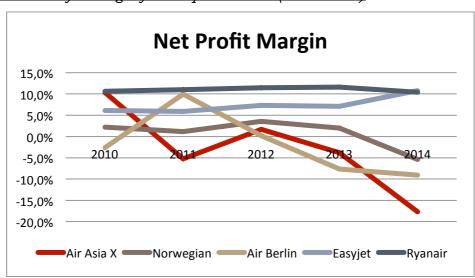


Figure 17: Net Profit Margin for Sample Airlines (2010-2014)

Source: Own Creation, based upon data from airline annual reports (2010-2014)

### 5.2.4. Financial Metrics Analysis

While the above analysis of NAS' financial performance shows that it lacks the liquidity of many of its peers and its profitability lags behind that of Ryanair and EasyJet, it does not provide any meaningful insights into NAS' operational efficiency nor its productivity. Therefore, this section will aim to address the underlying operational drivers of NAS' financial performance through the use of six of the most common financial metrics within the airline industry; available seat kilometres ("ASK"), revenue passenger kilometres ("RPK), load factor, Yield, cost per available seat kilometre ("CASK") and revenue per available seat kilometre ("RASK"). The first three are measures of efficiency while the latter three measure profitability. The difference between these profitability metrics and the net profit margin is that the metrics only take into account profits or losses as a result of an airline's operations whereas the net profit margin ratio includes non-operational factors such as depreciation, amortisation and taxes. Through this analysis, we hope to be able to identify the areas of NAS' operations that need to be addressed in order to maximise operational performance in the future.

#### **Available Seat Kilometres**

ASK is the most common measure of airline seating capacity; it is represented by the number of available seats multiplied by the distance flown (ATA, 2008). For example, an aircraft with seating capacity of 100 flown for 100 kilometres produces an ASK of 10000.

As we can observe from Figure 18, Ryanair is, far and away, the leader in terms of ASK. Its ASK increased from 86 billion to over 126 billion in the last five years. That result corresponds with Ryanair's strategy of constantly increasing the scope of its route network around Europe. During this period, EasyJet increased its ASK by less than 20 billion, from around 63 in 2010 to 80 in 2014.

After starting from below 20 billion ASK in 2010, a similar level to Air Asia X, NAS now offers around double the ASK when compared to that of Air Asia X. In total, NAS managed to increase its ASK by 161% during this five-year period, reflecting the company's recent commitment to growing its route network both within Europe and intercontinentally, fostered by the delivery of new aircraft.

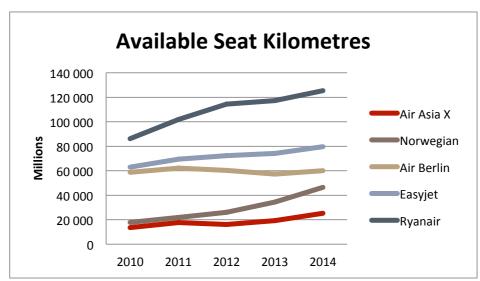


Figure 18: Available Seat Kilometres for Sample Airlines (2010-2014)

Source: Own Creation, based upon data from airline annual reports (2010-2014)

#### **Revenue Passenger Kilometres**

While ASK is simply a measure of supply-side capacity, RPK takes into account only those seats that are actually occupied by revenue paying passengers. Thus, it is a more accurate measure of the demand for the seats offered by airlines. This metric represents the product of the number of occupied seats by revenue passengers and the distance travelled (ATA, 2008).

**Revenue Passenger Kilometre** 120 000 100 000 Air Asia X 80 000 Norwegian Millions 60 000 Air Berlin 40 000 Easyjet 20 000 Ryanair 0 2010 2011 2012 2013 2014

Figure 19: Revenue Passenger Kilometres for Sample Airlines (2010-2014)

Source: Own Creation, based upon data from airline annual reports (2010-2014)

Figure 19 illustrates the RPK achieved by the airlines analysed within the last five years. It is not surprising that the results are positively correlated with ASK. Again, in absolute terms, Ryanair is the industry leader. Its RPK grew by 44% from 72 billion to almost 103 billion, an average yearly growth of 10%. EasyJet's RPK increased by 30%, with an average growth rate of 7%, exceeding its growth rate of ASK by 1%. While Air Berlin's RPK has been relatively constant in this sample period, NAS has seen the highest annual growth rate of 29%. This is a testament to the excellent job that the management at NAS has done in promoting the NAS brand and the airline's high level of customer service during the recent rapid expansion of its route network.

#### Load factor

Load factor provides a clear measure of efficiency as it shows the percentage of seats that are filled with revenue generating passengers on each individual flight. It is computed as a ratio of RPK to ASK (ATA 2008). Because this metric eliminates the length factor (kilometres), it allows for a more accurate comparison of competitors, whatever their route strategy happens to be.

**Load Factor** 100,00% 95,00% Air Asia X 90,00% Norwegian 85,00% Air Berlin 80,00% Easyjet 75,00% ■Ryanair 70,00% 2010 2011 2012 2013 2014

Figure 20: Load Factor for Sample Airlines (2010-2014)

Source: Own Creation, based upon data from airline annual reports (2010-2014)

From Figure 20, it is clear that EasyJet has experienced the best results by this metric, with around 90% load factor for each of the last five years. None of the other companies came close to this result as they were generally in the 80% to 85% range. Ryanair's load factor has been quite stable around 82-84%. Air Berlin managed to increase its load factor quite significantly in 2011 from 77% to 84% but it has remained around this level ever since. Even though NAS' load factor of 77% in 2010 was slightly above that of Air Berlin and Air Asia X, the company didn't manage to generate the same rate of growth as those two airlines. Consequently, it has generally lagged behind its competitors, with a load factor below 80% until 2014. Given the fact that NAS' long-haul operations are based upon infrequent flights, it needs to generate load factors much closer to those achieved by EasyJet in order to make its long-haul expansion plans financially viable.

#### Yield

Yield measures the average revenue per RPK (ATA, 2008). Figure 21 illustrates the yields for each of the companies for the last three years, measured in Euros. We notice that Air Asia X has had the lowest yield out of all the airlines considered, on the level slightly above 3 eurocents, making it the cheapest one in terms of ticket prices. Ryanair comes next, with yields between 4.5 and 5 eurocents and is the cheapest among European airlines. Air Berlin has consistently been the highest yielding airline, with average yield of around 8.4 eurocents in 2014, which was about 1 eurocent higher than EasyJet. NAS' yield in 2012 was at the similar level of that of Air Berlin. However, within the last two years, it decreased significantly to slightly over 6 eurocents. This indicates that the company may be becoming more competitive in terms of fares. However, it could also be attributable to the introduction of its long-haul services if the increase in revenues generated on those flights grows at a slower rate than the increase in distance flown, thus leading to lower yields.

0,09
0,08
0,07
0,06
0,05
0,04
0,03
Air Asia X Norwegian Air Berlin Easyjet Ryanair

Figure 21: Yield for Sample Airlines (2012-2014)

Source: Own Creation, based upon data from airline annual reports (2012-2014)

# Cost per ASK and Revenue per ASK

The last two metrics examined will help us to measure the airlines' ability to make a sustainable profit. CASK represents the average expense per unit of output, while RASK measures the average revenue received per unit of output (ATA 2008). CASK is calculated by dividing operating expenses by the total ASK produced or simply as a product of the load factor and passenger yield. On the other hand, RASK can be computed by dividing company's operating revenue by its ASK. The difference between RASK and CASK is the earnings per unit of output.

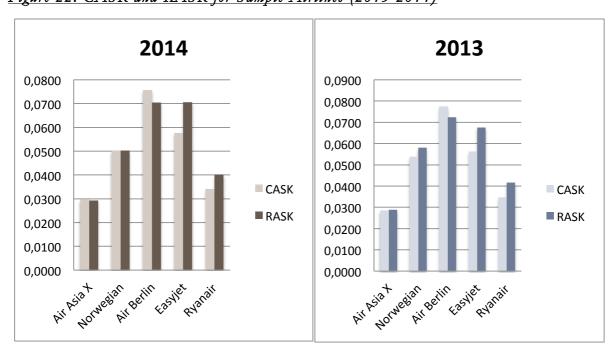


Figure 22: CASK and RASK for Sample Airlines (2013-2014)

Source: Own Creation, based upon data from airline annual reports (2013-2014)

Figure 22 shows the results from 2013 and 2014. In terms of profitability, EasyJet is the standout performer, as it generated a profit of 1.29 eurocent per unit of capacity. Ryanair followed with 0.6 eurocent. However, the two airlines achieved their profits through different means. Ryanair achieved its profitability by generating a CASK that was 40% lower than that of EasyJet, while EasyJet focused on generating the highest level of RASK in 2014.

Air Asia X achieved the lowest CASK out of all the airlines, just under 3 eurocents. However, it has been unable to generate the same level of RASK as the other airlines. As a result, it suffered from negative profitability in 2014. The highest loss per ASK was suffered by Air Berlin, which has, by far, the highest cost base out of the comparable airlines. For NAS, its performance declined from 2013 to 2014. While it was able to lower its CASK to 5 eurocents, there was an even larger decline in RASK, which meant that the company was basically breaking even for every unit of output that it produced during 2014. This is attributable to its long-haul operations, which are failing to generate the same levels of RASK as the short-haul operations.

#### 5.2.5. Summary

This section has provided an in-depth analysis of NAS' financial position, and compared its financial performance with four relevant peers in the industry through three common financial ratios and six financial metrics measuring liquidity, profitability and efficiency.

Based on the raw data, we see that NAS has historically generated quite consistent profits, with 2014 being the only year in which it suffered from negative net income. However, when we compare NAS with its peers, it is not the leading performer according to any of the ratios or metrics that we analysed. Ryanair and EasyJet are consistently the best performers, whereas NAS tends to lag behind these two airlines on every measure. Apart from load factor, where NAS is marginally the worst performer, the company has generally compared competitively with Air Asia X and Air Berlin.

From these results, we can draw a couple of tentative conclusions. Firstly, it is arguable that Ryanair and EasyJet are better positioned than NAS to expand into the long-haul market as they have larger route networks, higher levels of profitability, superior balance sheets and better operational efficiency. Therefore, they would be more able to absorb short-term financial difficulties associated with commencing long-haul operations. The fact that they have not expanded into the long-haul market reinforces the high level of risk inherent in such a venture.

Secondly, both Air Asia X and Air Berlin also incorporate long-haul routes in their network. They consistently perform worse than Ryanair and EasyJet. While we recognise that the performance may be explained by unrelated factors such as managerial expertise, marketing strategies or different customer demographics, it nonetheless shows that there is a negative correlation between long-haul services and financial performance. Given that a number of key measures have been trending down

for NAS since the commencement of its long-haul operations such as net profit margin, yield, RASK, current ratio and equity ratio, the company needs to tread very carefully and monitor the competitive developments in the long-haul market to make sure that it does not drain its resources and cause financial distress down the road.

# 5.3. Key Operational Issues

This section seeks to address how NAS has sought to overcome some of the key operational issues that were raised during the literature review in Part Three. As discussed in that chapter, LCCs are increasingly adopting certain elements of the full-service model in an attempt to improve the quality of service and customer satisfaction. That remains true in the case of NAS' intercontinental expansion as important features of its short-haul model have been adapted to improve the company's profitability and competitiveness in the long-haul market.

# 5.3.1. Cargo

With NAS using the Dreamliner for its long-haul operations, it is estimated that there is cargo space of over 11 tonnes on every flight, which is the equivalent of 27% of its maximum payload (Norwegian Annual Report, 2013). With so much belly space and the fact that the plane will take-off irrespective of how much cargo is loaded, any additional revenue that can be generated from utilising this cargo capacity will make a contribution to covering the costs of operating the aircraft, so long as the revenue generated covers its handling costs (CAPA, 2014a).

That being the case, NAS has set up a subsidiary, Norwegian Cargo, in 2013 in order to take advantage of the Dreamliner's large belly capacity. Although NAS could have outsourced its cargo operations, the company has stated that it decided to take the risk of doing it in-house due to the potential of generating higher revenues (Lennane, 2013). Currently, Norwegian Cargo offers air freight services to all locations in the Nordic region, multiple destinations within Europe along with Bangkok, New York and Florida (Norwegian Cargo, 2015). While NAS' decision to embrace cargo on its long-haul operations demonstrates an acceptance that air cargo plays an indispensable role in the transportation of time-sensitive and high-value commodities across the globe, NAS has nevertheless made it clear that the cargo operations will remain a niche product to be utilised on flights under the condition that it does not jeopardise the core passenger operations (Lennane, 2013). As a result, on NAS' short-haul network, it will only accept smaller items that do not impact the turnaround times of NAS aircraft at European airports (Cargo Forwarder, 2015).

### 5.3.2. Use of Primary Airports

Unlike other LCCs, NAS operates much of its network from primary airports in Sweden (Stockholm Arlanda), Norway (Oslo Gardomoen) and Denmark (Copenhagen). In addition, while

London Gatwick is technically a secondary airport when compared to Heathrow, it is one of the busiest airports in the world, handling over 38 million passengers in 2014 on more than 250,000 flights (CAA, 2014; p1). In fact, its passenger flow exceeds that of its Nordic bases. By operating its long-haul operations from these busy international airports, NAS is able to overcome the problem that other LCCs may experience in obtaining the necessary slots at primary airports in order to make its long-haul operations viable from a traffic flow point of view.

#### 5.3.3. Connections

In its short-haul network, NAS operates purely point-to-point services, which are less expensive and more efficient than hub-and-spoke models (Baldwin, 2014). Since NAS' long-haul network presently targets tourist hotspots not directly served from Scandinavia by many legacy airlines, it has chosen to stick with a point-to-point structure on its long-haul operations for now.

One of the key reasons for the failure of other carriers such as Zoom and Oasis was that they did not possess an established route network to provide the necessary route connectivity to their passengers (Taylor, 2013). In this respect, NAS is able to differentiate itself from its failed predecessors as it possesses a healthy network infrastructure with around 420 short-haul routes within Europe, which may be used by passengers to self-hub onto NAS' long-haul flights.

In addition, NAS hopes to convert Gatwick into a major hub for its long-haul operations. Not only does NAS operate over 30 feeder routes directly into Gatwick, with around 400 short-haul flights from London to other destinations in Europe, the company also hopes to be able to tap into feeder traffic from the substantial short-haul networks possessed by EasyJet and British Airways, who are currently the two largest airlines operating from Gatwick (Taylor, 2013). Therefore, Gatwick is not a typical secondary airport as it has an extensive array of connections available all around Europe, in addition to possessing high passenger flows (Onions, 2014).

To facilitate smoother connections, a new service called "Gatwick Connect" has been launched, providing a virtual interline arrangement for inbound passengers allowing them to visit a transfer desk at baggage claim, drop off their bags and obtain onward boarding passes (Noakes, 2013).

# 5.3.4. Aircraft utilisation

Despite the high rates of utilisation that legacy carriers currently possess, NAS has been able to achieve even higher utilisation through two main strategies; cramming more seats into its Dreamliners (291 compared to 250 in standard configurations) and by scheduling them on back-to-back flights across the Atlantic and then onto Bangkok (Economist, 2014). This allows NAS to keep its aircraft in the air for up to 18 hours daily as opposed to the 16 hours of legacy carriers.

In an interview with Sandstrom (2013), Mr. Kjos stated that achieving higher aircraft utilisation is a different proposition in long-haul operations when compared to the short-haul. The latter simply focuses on the loading and unloading of passengers while the former requires cleaning, security and maintenance in addition to passenger handling. However, Mr Kjos was confident that 90 minutes would provide NAS with sufficient turnaround time.

Another contributing factor to the higher aircraft utilisation arises from the fact that NAS does not provide onward connections on its flights, but requires customers to self-hub. This differs from legacy carriers whose aircraft arrive in waves from different feeder destinations and wait for hours at the airport before departing (Ho, 2013).

# 5.3.5. Stimulation of Demand

Within Europe, NAS has targeted high-density routes such as those from Oslo to Bergen, Stockholm and London as well as satisfying the demand by Scandinavians for short holidays to popular tourist destinations such as Mallorca, the Canary Islands and Dubrovnik. NAS is using a similar strategy in its long-haul operations as the routes to the U.S. and Bangkok are high density and popular tourist destinations for Europeans, especially during the winter months when many Norwegians seek a warm, beach holiday to escape the harsh Scandinavian cold.

Prior to NAS' entry into the Trans-Atlantic market, Maslen (2013) estimated that there were almost 2.8 million bi-directional origin and destination passengers between the U.S. and Scandinavia, with SAS having the largest market share of 32.6%. Given that there is a lack of direct services on the Trans-Atlantic route from Scandinavia, this provides NAS with an obvious market opportunity.

In addition, NAS hopes to tap into the large segment of people visiting family and friends in the U.S. Based on recent Census data from 2013, it is estimated that there are almost 10 million people living in the U.S. with Scandinavian heritage; 4.49 million Norwegian, 4.07 million Swedish and 1.36 million Danish (Census, 2013). Given that the official population of Norway is only 5.08 million (World Bank, 2015), the number of people living in the U.S. with Norwegian heritage represents a large potential market that NAS can tap into through the provision of affordable, long-haul flights from Europe into the major metropolises in the U.S.

This is a strategy advocated by Francis et al. (2007), who believed that travellers flying for the purpose of visiting family and friends demonstrate the greatest potential for demand growth. Airbus (2014) supported this conclusion because this category of passengers were considered to be the most resilient to crises as human beings feel a need to physically connect with close relations face-to-face during difficult times.

### 5.3.6. Fleet

As discussed in section 5.1.2., NAS' modern fleet of Dreamliners provides it with an aircraft that possesses unprecedented fuel efficiency and reduces operating costs by more than 20% when compared to the older-generation planes that doomed other LCCs such as Zoom Airlines and Air Asia X's European experiment (Noakes, 2013). With fuel accounting for up to 50% of operational costs on long-haul flights, Taylor (2013; p71) estimated that, in nominal terms, Dreamliners are £5 million a year less costly to operate.

Although this provides NAS with a cost advantage, the sobering reality is that it has only 8 Dreamliners in its fleet and Israel (2015) believed that, for a LCC to succeed in the long-haul market, it needs to possess an adequate number of aircraft to serve its destinations with an adequate number of frequencies. Route frequency is a particularly important factor for attracting business travellers. In an interview with the Economist (2014), Michael O'Leary, the CEO of Ryanair, stated that he believed that a fleet of at least 30 new, technologically advanced aircraft would be necessary for a LCC to compete effectively in the long-haul market.

With only nine more Dreamliners on order, the size of the long-haul fleet will only be 17-strong upon delivery, far below the threshold mentioned by Mr. O'Leary. Therefore, it will take many years for NAS to build up a sufficient fleet to become a major challenger in the long-haul market as both Boeing and Airbus have long waiting times, up to 8 years, for the planned production of the 657 Boeing Dreamliners and 456 Airbus A350 currently on order (Israel, 2015).

### 5.3.7. In-Flight Amenities

NAS' base fare allows passengers only 10kg of carry-on baggage. For an extra fee, usually between €30 and €50, the Lowfare+ product provides passengers with 20kg of checked luggage, seat reservation, and meals (see Table 6). This pricing structure is very similar to its short-haul operations.

Although NAS exhibits traditional characteristics of the LCC model by charging extra for baggage and meals, it does provide travellers on its long-haul flights with individual Android-based in-flight entertainment systems with features ranging from movies, music, moving maps to even an in-flight electronic snack bar (Marketline, 2015). In addition, NAS has increased the seat pitch from 29" to 31" for long-haul flights to increase the comfort levels for long-haul passengers.

Table 6: NAS Economy and Premium Class Product Offerings

	Economy cabin 31 inch legroom			Premium cabin 46 inch legroom		
	Lowfare	Lowfare+	Flex	Premium	Premium flex	
Hand baggage	1x10kg	<b>√</b> 1x10kg	<b>√</b> 1x10kg	<b>√</b> 1x10kg	<b>√</b> 1x10kg	
Checked baggage	\$	<b>√</b> 1x20kg	<b>√</b> 2x20kg	<b>√</b> 2x20kg	<b>√</b> 2x20kg	
Seat reservation	\$	<b>✓</b>	✓	✓	1	
Fast Track	\$	\$	✓	<b>√</b>	1	
Meals	\$	✓	✓	✓	1	
Lounge	-	-	ı	✓	✓	
Changes	\$	\$	1	\$	1	
Refundable	-	-	1	-	1	

Source: Own creation, based on information from NAS Website

#### 5.3.8. Premium Classes

NAS provides a "Premium Class" service on its long-haul operations. However, Noakes (2013) equates this service with the premium economy product that has become increasingly common amongst legacy carriers. It is not a full business class product as it lacks a flat bed and the full range of amenities enjoyed by business travellers on other airlines such as British Airways ("BA").

We conducted a quick comparison of prices for NAS' Premium and PremiumFlex product offerings with the Premium Economy and Business Class offerings of some of its main competitors along the London-New York, London-Los Angeles and Oslo-New York routes. These routes were chosen as they are the ones most likely to attract business passenger traffic, as opposed to a route such as Oslo-Bangkok, which is mostly targeted at leisure travellers. Monteiro (1998) found that business passengers are not particularly price sensitive, were inclined to make reservations shortly before departure and would not remain at their destinations for a long period of time. Therefore, we conducted our fare analysis on May 25 for flights leaving on June 1 and returning a week later to satisfy the characteristics of business travellers (see Table 7, Table 8 and Table 9).

In terms of the airlines that we chose for analysis, SAS and United are the only two other airlines that provide direct flights from Oslo to the U.S. For the London-New York and London-Los Angeles routes, we have chosen legacy airlines with direct flights with significant seat capacity on these routes. Each belongs to one of the three large global airlines that dominate market share in the Trans-Atlantic route; United (Star Alliance), Delta (SkyTeam) and BA (OneWorld).

The results show that NAS' premium fares are significantly lower than the business class offerings of its competitors, more than €2000 on the Oslo-New York routes and at least €3000 cheaper on the London-U.S. routes. On the London-Los Angeles flight, NAS' premium price was over €6000 cheaper than a business class seat on BA and Delta. This large discrepancy highlights the

fact that NAS may be artificially suppressing potential revenues by not offering a full business class service.

However, given that NAS lacks the necessary frequencies along many of its long-haul routes, it is difficult for businesses to consider NAS as a serious option, lest their employees be stranded overnight in another country and forced to miss important business meetings. From this perspective, it is arguable that NAS made a strategic decision to not target the business segment until it is able to build-up sufficient route density to be a strong competitor in the market for business travellers. Therefore, its current product is aimed at leisure travellers, and employees of small and medium sized businesses, who want to experience a more exclusive service but are also more cost conscious than large companies with bigger travel budgets.

The issue with this strategy is that other airlines also offer a premium economy option, where the prices are competitive with those offered by NAS. For example, the fares of United's Economy Plus seats are lower than NAS' Premium fare on all three routes. In contrast, BA's Premium Economy, Delta's Comfort+ and SAS Plus are around €1000 or more expensive when compared to NAS' Premium Cabin.

Table 7: London - New York Premium and Business Class Fares

NAS	NAS	BA Premium	BA Business	Delta	<u>Delta</u>	<u>United</u>	<u>United</u>
<u>Premium</u>	<b>PremiumFlex</b>	Economy		Comfort+	<b>Business</b>	Economy Plus	Business
1430	1774	2748	6569	2368	6903	1044	4570

Source: Own Creation, based on prices on airline websites (all prices are in €)

Table 8: London - Los Angeles Premium and Business Class Fares

NAS	NAS	<b>BA Premium</b>	BA	<u>Delta</u> <u>Delta</u>		<u>United</u>	<u>United</u>
<b>Premium</b>	PremiumFlex	Economy	<b>Business</b>	Comfort+	Business	Economy Plus	Business
1659	2233	3731	8210	2368	8207	1343	5260

Source: Own Creation, based on prices on airline websites (all prices are in €)

Table 9: Oslo - New York Premium and Business Class Fares

NAS	NAS	NAS SAS Plus SAS Business		United	<u>United</u>
<b>Premium</b>	<b>PremiumFlex</b>		Class	Economy Plus	Business Class
1111.90	1464.2	2132.5	3384.5	1121	4395.5

Source: Own Creation, based on prices on airline websites (all prices are in €)

#### 5.3.9. Price Comparison

Given that NAS' core competitive advantage in the long-haul ought to be the fact that it is able to offer the lowest fares along the routes that it competes on, we have decided to perform an empirical price comparison in order to determine whether this competitive advantage exists in reality. This price comparison is conducted along three routes; Oslo-Bangkok, Oslo-New York and London-New York. The reason these routes have been chosen is that they are the ones with the highest frequencies along their respective routes corridors of Europe-Asia, Scandinavia-U.S. and

London-U.S. In addition to an analysis of NAS' base fare and its LowFare+ offering, we compare these prices with the rival with the largest seat capacity along that particular route and the rival with the lowest price.

We used Skyscanner, a popular flight search engine, to find the lowest priced rival within each month. We then confirmed the prices on the website of the airline in question. We recognise that not all airlines show up in the Skyscanner search engine, but due to time constraints and the fact that it would be impractical for us to look at every single possible flight combination along a particular route, we believe that this was a practical, time-effective solution, which should yield reasonably accurate results for the purposes of our comparative study.

This price search was performed on May 25, 2015 and we chose to focus on fares for the next six months. While airlines generally publish their fares one year in advance, we believe that the sixmonth window was appropriate as a very limited number of passengers purchase their tickets more than six months in advance of their departure date. The fares listed are based on the lowest possible return flight that could be achieved within that particular month. Although this is an imperfect way of measuring the prices, we believe that it is reasonable considering the fact that fare prices fluctuate constantly, often many times daily. As such, our goal was simply to find the lowest prices for a return fare on the analysed routes within each calendar month to act as a guide for the price comparison. In this analysis, we assume that leisure travellers have flexible itineraries and are highly price sensitive, and thus, will seek the lowest fare possible. Moreover, by looking at a six-month period rather than a single month, we are able to gain a more complete picture of how NAS' compares with its competitors and reduces the distorting effect of a small sample set. Table 10, Table 11 and Table 12 provide a summary of the fare prices along the three routes that we analysed.

Table 10: Oslo - Bangkok Price Comparison

Month	NAS Base	NAS	<u>Thai</u>	NAS Price	Lowest Rival Airline	NAS Price
	<u>Fare</u>	LowFare+	<u>Airways</u>	<u>Advantage</u>		<u>Advantage</u>
			Economy	Base/LowFare+		Base/LowFare+
<u>June</u>	570	693.2	594	4% / -16.7%	387 (Cathay Pacific;	-47.3% / -79%
					stopover in Hong Kong)	
<u>July</u>	713.7	836.9	793	10% / -5.5%	478 (Aeroflot; stopover in	-49.3% / -75%
					Moscow)	
August	546.2	669.4	592	7.7% / -13.1%	415 (Qatar Airways;	-31.6% / -61.3%
					stopover in Doha)	
September	376.2	499.4	543	30.7% / 8%	382 (Cathay Pacific;	1.5% / -30.7%
					stopover in Hong Kong)	
October	400.9	524.1	658	39.1% / 20.3%	416 (Qatar Airways;	3.6% / -26%
					stopover in Doha)	
November	376.2	499.4	655	42.6% / 23.8%	415 (Qatar Airways;	9.3% / -20.3%
					stopover in Doha)	

Source: Own Creation, based on prices on airline websites (all prices are in €)

Table 11: London - New York Price Comparison

Month	NAS Base	NAS	BA	NAS Price	Lowest Rival Airline	NAS Price
	<u>Fare</u>	LowFare+	Economy	<u>Advantage</u>	<u>Advantage</u>	
				Base/LowFare+		Base/LowFare+
<u>June</u>	620.5	748.5	595	-4.3% / -25.8%	532 (Iberia; Stopover in	-16.6% / -40.7%
					Madrid)	
<u>July</u>	879.3	1007.3	1421	38% / 29%	667 (Ukraine	-31.8% / -51%
					International; stopover in	
					Kiev)	
August	731.5	859.5	1421	48.5% / 39.5%	558 (United; stopover in	-31% / -54%
					Dubai)	
September	509.7	637.7	607	16% /-5%	506 (Ukraine	-1% / -26%
					International; stopover in	
					Kiev)	
October	472.2	600.7	607	22.2% / 1%	492 (Ukraine	4% / -22%
					International; stopover in	
					Kiev)	
November	472.8	600.8	530	10.8% / -13.4%	477 (United; stopover in	1% / -26%
					Dubai)	

Source: Own Creation, based on prices on airline websites (all prices are in €)

Table 12: Oslo - New York Price Comparison

Month	NAS Base Fare	NAS LowFare+	SAS Economy	NAS Price Advantage	Lowest Rival Airline	NAS Price Advantage
				Base/LowFare+		Base/LowFare+
June	479.6	578.2	559.9	14.3% / -3.3%	448 (Swiss; stopover in Zurich)	-7% / -29%
July	701.3	799.9	913.9	23.3% / 12.5%	722 (British Airways; stopover in London)	2.9% / -10.8%
August	537.6	636.2	559.9	4% / -13.6%	389 (American Airlines; stopover in London)	-38% / -63.5%
September	403.9	502.5	559.9	27.9% / 10.3%	354 (Finnair; stopover in Helsinki)	-14% / -41.9%
October	354.6	453.2	559.9	36.7% / 19%	305 (Finnair; stopover in Helsinki)	-16.3% / -48.6%
November	280.8	379.4	536.58	47.7% / 29.3%	258 (Air Canada; 2 stopovers in Frankfurt and Toronto)	-8.8% / -47%

Source: Own Creation, based on prices on airline websites (all prices are in €)

#### **Main Competitor**

Based on the data, it seems that NAS' base fare is consistently lower than the fares offered by its major rival on each of the three routes. With the exception of June on the London-New York route, NAS' base fares were between 4% and 48.5% cheaper than the fares offered by Thai Airways, BA and SAS.

However, this price advantage is eroded if customers choose the LowFare+ product, which includes seat reservation, 20kg of checked luggage and meals on-board. In eight out of the eighteen months in the sample, the fares offered by NAS were higher than its major competitor with a maximum price disadvantage of almost 26% on the London-New York route in June. Given that the LCC model has not been widely accepted on long-haul routes and legacy airlines continue to provide

a full range of services on these routes, it is arguable that the LowFare+ product is the most comparable fare structure. That being the case, it shows that NAS has actually failed to establish a price advantage on the many of the routes that it is currently offering.

#### **Lowest Priced Rivals**

The results are even bleaker when we take indirect flights into account. When compared to the lowest priced rival, NAS is able to achieve a price advantage in less than half of the sample months, with a maximum price advantage of less than 10%. Even when looking at the base fare, NAS suffered from significant price disadvantage in many of the sample months, with the worst performance along the Oslo-Bangkok route, where the price disadvantage approaches 50% in both June and July.

Given the poor performance of the base fare, it is unsurprising that the results are disheartening when we examine the LowFare+ product. In this case, NAS suffers from a price disadvantage in every single month in the sample, ranging from 10.8% to 79%.

## Time of Booking

The results also show that NAS's prices between September and November are much more competitive than they are in June, July and August. There could be two possible explanations for this outcome. Firstly, the summer months are when demand is highest. As a result, the cheapest fares are sold well in advance and the fares that we observed on May 25 were the more expensive ones that remain for passengers booking closer to the date of departure. Secondly, it is also possible that NAS is simply trying to capitalise on the strong demand during the summer months by charging high fares in order to maximise revenue, safe in the knowledge that it will be able to preserve high load factors in spite of the high prices. Given that Sturreson (2010) identified that LCCs tend to adopt a simplified approach to revenue management whereby fares are priced solely upon the time of travel, whether it is peak or off-peak, and how far in advance the ticket is purchased, both of the above explanations may be reasonable in providing an insight as to the reasons behind NAS' price competitiveness, or lack thereof, on its long-haul routes.

# 5.3.10. Summary of Key Operational Issues

This section has provided an overview of how NAS has adapted various elements of its short-haul operations to maximise the chances of success in the long-haul market, which is highly competitive and dominated by legacy carriers. Table 13 compares the key differences between NAS' short-haul and long-haul operations with regards to the main operational issues raised in this section.

Table 13: Key Differences between NAS Short-Haul and Long-Haul

Operational Issue	NAS Short-Haul	NAS Long-Haul Strategy
Cabin Configuration	Economy Class Cabin only	Utilises a Premium Class Cabin, but falls short of business class offering
Airport Location	Primary airports in Scandinavian capitals along with secondary and regional airports in other parts of the route network	Primary airports in Scandinavian capitals plus London Gatwick
Turnaround Times & Aircraft Utilisation	Turnaround times as little as 30 minutes and aircraft utilisation of between 10 and 12 hours daily	Objective to have 90 minute turnarounds and aircraft utilisation of up to 18hrs per day by using same aircraft across Atlantic then to Asia
Route Structure	Point-to-point network almost exclusively serviced by Boeing 737-800	Point-to-point with no onward interlining or baggage transfer. Serviced by Dreamliner
Product Package	Unbundled; customers pay for seat with additional services available for a fee	Unbundled, but in-flight entertainment is included
Cargo Services	None or limited to small parcels so that it does not affect turnaround times	Established Norwegian Cargo to handle cargo services
Stimulation of	Generated leisure demand to holiday	Opportunity to target leisure travellers and VFR
Demand	destinations especially to its Spanish bases in Mallorca and Canary Islands	segment as there is a shortage of direct connections from Scandinavia to popular destinations in the U.S. and Bangkok
Prices	13th lowest among LCC peers in Europe	Base fares are, on average, lower than rivals offering direct services. However, for the LowFare+ product and when indirect flights are included, NAS suffers from price disadvantages

Source: Own Creation

The key changes include the fact that NAS has introduced a Premium Class cabin on the long-haul routes that competes effectively on price with the Premium Economy services of rival airlines, established Norwegian Cargo to capitalise on the large payload capacities of the Dreamliner, and the introduction of in-flight entertainment to appease customers who demand more amenities on longer flights. Moreover, NAS aims to gain a competitive advantage over rivals on the long-haul routes by increasing aircraft utilisation to around 18 hours per day by using the same aircraft for flights from the U.S. to Europe and then onwards to Bangkok. This reduces costs associated with overnight accommodation for the crew and idle aircraft.

Despite these changes, NAS has also stuck to some of its core principles such as a point-to-point network structure, with no interlining agreements or onward transfer services for its passengers. The key reason is that there are significant costs associated with such arrangements and NAS, at this early point of its international expansion, lacks the resources to provide such services independently. Given that there are very few cities in Europe with the necessary traffic flow to sustain point-to-point services, NAS has made a smart strategic decision in establishing Gatwick as a key base, in addition to the primary airports in Oslo, Copenhagen and Stockholm. The latter three are currently underserved by existing legacy carriers in terms of direct flights to the U.S. and Asia. Finally, NAS still offers an unbundled product, whereby passengers are required to pay extra for additional services such as seat allocation, checked baggage and on-board meals. This is one of the core points

of differentiation between legacy carriers and LCCs that NAS has been keen to maintain and places the onus upon passengers to choose whether or not they want to have these services provided.

The results of the price comparison show that, if air travellers are willing to cope with the inconvenience associated with flight transfers and longer travel times, they are still able to obtain much lower fares flying with existing airlines when compared to the fares offered by NAS. These results reinforce the established wisdom that a hub-and-spoke system is the most effect system for long-haul routes as legacy airlines with a dominant presence at hub airports can channel traffic from their many short-haul spokes to their hub in another country, which is also connected to many cities (Gillen and Morrison, 2005). Therefore, high frequencies can be developed on the spoke routes to feed passengers into hubs for onward connection, thus creating the possibility for higher long-haul route densities, high load factors, lower average costs and consequently, lower fares. Since this model is aimed at maximising yield throughout the entire network, it is better tailored to long-haul routes as a much greater percentage of passengers require connection at one or both ends of their journey, as compared to short-haul routes, where passengers can generally find a point-to-point flight to their final destination.

In addition, the results of the premium class comparison confirmed the widespread belief of the previous literature as it showed that BA and Delta were able to charge return fares in excess of €8200 for their business class cabin on some routes and as a result, the substantial margins from these high-yielding customers allow these airlines to subsidise economy class seats and maximise load factors. This is a primary reason why NAS has, thus far, failed to achieve a price advantage in the long-haul market.

The strategic implication is that NAS is best positioned to compete with legacy airlines currently offering direct services along the routes served by NAS, primarily on its base fares. If passengers look beyond the base fare, they will realise that the product package offered by NAS is inferior to those of legacy airlines and come to the realisation that they are better off remaining loyal to existing carriers. Therefore, NAS should seek to appeal to leisure travellers with the highest levels of price sensitivity, such as backpackers and students, who travel light, prefer direct connections and are willing to forego all amenities in order to obtain the lowest possible fares.

#### 5.4. SWOT Analysis

Peng (2010) stated that the SWOT analysis is one of the leading tools available in global business allowing firms to ascertain their critical strengths, weaknesses, opportunities and threats. Through this analysis, it should enhance our understanding of how NAS will be able to exploit its core strengths to take advantage of the opportunities inherent in an inefficient market while minimising

the impact of the firm's weaknesses so that it can mitigate the risk factors that are always prevalent in such a dynamic industry.

### 5.4.1. Strengths

#### Strong leadership

In her analysis of the success behind Southwest Airlines, Gittell (2005) outlined the strong leadership of Herb Kelleher as a key contributing factor as it allowed the company to create shared goals, facilitate knowledge transfer throughout the organisation and to foster mutual respect between the top levels of management with lower level employees. When employees are properly rewarded and feel empowered in their job, it will lead to improvements in employee satisfaction and productivity (Heskett et al., 2008). This also has a flow-on effect on the ability of the firm to maximise customer satisfaction, loyalty and ultimately, revenue growth and firm profitability.

In Bjørn Kjos, NAS has a charismatic CEO who is fully invested in the success of the company, having been one of the founding partners in 1993. His previous experience includes six years as a fighter pilot in the Norwegian Air Force as well as twenty years as a legal practitioner (Marketline, 2015). Therefore, not only does he have the requisite qualifications to be an effective CEO, but he is also highly respected within the industry and amongst NAS employees. Under his watch, NAS has grown into the successful airline that it is today. His achievements at the helm of NAS were officially recognised in 2009 when he won the Ernst & Young Entrepreneur of the Year (Boarding, 2009) and Manpower's Leader of the Year award (Sletten, 2009).

### **Customer Service**

NAS' focus on providing the highest level of customer service is institutionalised through its vision statement: "Everyone should afford to fly." Its objective is to provide opportunities for everyone to travel by air through the provision of low fares, a high-quality travel experience, and helpful and friendly service. In 2012, NAS was formally recognised when it received the award for Highest Customer Satisfaction from the Swedish Quality Index. Given that the airline industry is consistently amongst the worst performing industries in terms of generating customer satisfaction (Peterson, 2010), this is a source of significant competitive advantage for NAS moving forward.

#### Strong Position in Scandinavia and Internationally

NAS is a market leader within the Norwegian domestic market. It has an extensive network of routes within Scandinavia and offers a high frequency of flights between the major cities. In 2014, its share of capacity in the Scandinavian market was around 23% (SAS, 2014). Unlike many of its competitors, the company is still experiencing strong growth in routes, revenue and market share, NAS added 81 new routes during 2013, operating revenues grew by 20% and passenger growth was

almost 17% (Norwegian Annual Report, 2013). Today, NAS is the third largest discount carrier in Europe and the seventh largest in the world.

#### Modern fleet

As a relatively new entrant in the aviation market, NAS possesses one of the youngest fleets in Europe. This provides it with a significant advantage over legacy carriers operating with older generation aircraft because the Boeing 737-800 and the Dreamliner, which make up the majority of the fleet, have larger cabin capacities and are more fuel efficient (Norwegian, 2012).

The modern fleet also allows NAS to operate each of its jets for longer duration than its rivals, so it needs fewer of them than a carrier trying to serve the same routes with older planes. Finally, there are also cost savings in terms of lower maintenance and fuel costs.

In addition, NAS' fleet is quite uniform as it has only three models of aircraft in its operations, with around 90% of the total fleet being the Boeing 737-800. The homogeneity of the fleet is capable of producing cost savings resulting from economics of aircraft utilisation and maintenance, thus allowing the airline to yield higher operating margins (Zuidberg, 2014; Brüggen and Klose, 2010).

### **Strong Financial Position**

NAS generated positive profits every year between 2007 and 2013. As a result, the company has a relatively clean balance sheet along with strong positive cash flows. Its financial position is enhanced by its 20% ownership stake in Bank Norwegian, which generated a profit of 314 million NOK in 2014 (Bank Norwegian, 2014).

As a Norwegian company, NAS is able to gain access to export credits offered by the Ministry of Trade and Industry. This program provides stable long-term financing at low interest rates (Nortrade, 2015).

The company has been able to leverage these financial advantages to expand its fleet size. Of the 44 direct-buy aircraft which were delivered from Boeing in 2013, NAS was able to finance 31 of them with predominantly export credits, equity raisings and retained earnings from the previous years (Marketline, 2015). The other 13 were purchased as part of a sale-and-leaseback agreement.

The fact that the company occupies a strong financial position helps it to overcome the issues related to undercapitalisation that contributed to the collapse of other LCC long-haul operators such as SkyTrain and Zoom Airlines (Noakes, 2014).

#### **Unblemished Safety Record**

When viewed objectively, air travel is the safest mode of transportation. With a total of just 12 fatal accidents out of 38 million flights, 2014 was the safest year in aviation history (IATA, 2015). However a number of high profile incidents such as the disappearance of Malaysian Airlines flight

MH370, the crash of Air Asia flight QZ8501 en route from Indonesia to Singapore and more recently, the pilot-initiated crash of Germanwings flight 9525 in the French Alps have heightened awareness of flight safety. The industry as a whole is examining the technology currently being used on flights in order to more accurately track aircraft in the air and to improve passenger safety.

In light of these recent events, NAS can point to the fact that it has been running a safe operation since its incorporation in 1993 and has not been involved in any fatal incidents through the operation of any of its aircraft.

## **Innovative Capabilities**

One of NAS' key innovations has been the development of in-flight Wi-Fi, which allows its customers to remain connected for the duration of the trip. About 80% of flights along NAS' European, North African and Middle Eastern routes are now equipped with this service (Marketline, 2015).

In 2014, NAS was given the Best Single Achievement Award for its moving map on 787 Dreamliners by Passenger Choice Awards. While this feature does not provide the company with any direct source of revenue, it does nevertheless demonstrate its capacity to constantly innovate new products and services for the benefit of its customers.

## Cost Leadership

Norwegian Annual Report (2013) stated that, even though the company has an average salary level twice that of its Europeans rivals, it has been able to take second place in terms of cost efficiency at primary European airports through a combination of efficient operations, lean management structure, focus on online distribution and a state-of-the-art aircraft fleet.

When we analysed the cost base of NAS and four of its peers in section 5.2.4., we found that it has a higher CASK than Ryanair but lower CASK than both EasyJet and Air Berlin in the European market. This reinforces the fact that NAS compares very favourably when it comes to cost efficiency.

#### **Competitive Low Fares**

It follows that NAS' low cost base allows it to offer competitive low fares to its customers. In a study conducted by Which Airline (2015), they found that NAS charged an average price per route of €104.02, which placed it in 13<sup>th</sup> position out of all European airlines. It was able to maintain the same position when the same analysis was conducted to include 20kg of checked baggage.

In the long-haul price comparison that we conducted in section 5.3.9., we found that NAS' base fare is almost always cheaper than its biggest rival on each of its long-haul routes. Even when compared with airlines offering indirect services, the base fare was very competitive if customers

were willing to book several months ahead of their travel date in order to take advantage of the lowest priced fares on offer.

### Point-to-Point Services

NAS operates a point-to-point network structure. This strategy enables the company to achieve better asset utilization and more reliable on-time performance (Ball, 2007). It is also preferred by passengers because it minimises connections and travel time by bypassing layovers at major hubs.

Specifically in the long-haul market, the routes from Scandinavia to the U.S. and Asia are underserved by existing airlines. As such, this presents NAS with an opportunity to satisfy the demand by travellers in the region for affordable, direct services to popular leisure destinations in Asia and North America.

## Frequent Flyer Program

While most other LCC have shied away from offering FFPs for fear that it would be too costly to administer, NAS has been offering its customers with a FFP since 2007. Customers are able to accrue CashPoints on flights, hotels and rental cards, which they can subsequently use on future flights. This provides a point of differentiation for NAS against its low-cost peers as the program can generate increased customer loyalty and provide NAS with valuable information about the preferences of its customers so that the company is better positioned to provide services that are better tailored to the specific demographics of its customer base.

## **Brand Name & Recognition**

Wielgoss et al. (2013) stated a strong brand could be an important facilitator of growth and financial success as it can foster customer loyalty and drive sales. NAS has established itself as a market leader within Scandinavia and one of the largest LCCs in Europe. NAS is committed to continuing to build its brand name, which is why it established the subsidiary, Norwegian Brand Ltd, in 2013. The stated objective is to maximise NAS' brand and marketing activities.

#### 5.4.2. Weaknesses

## Not a member of any airline alliance

Although many large legacy carriers have embraced the potential benefits associated with strategic alliances, NAS made a conscious decision to expand its network organically rather than to enter into one of the large global alliances. In this context, Porter (1996) stated that strategic alliances within the airline industry provided a poor substitute for innovation and allowed airlines to purport that they operate a larger network than they actually do. With the benefit of hindsight, it is clear that this strategy has proven relatively successful in NAS' short-haul operations as it has been able to

successfully expand and set up bases throughout its European network. Something the company would not have been able to do if it was affiliated to an alliance (Sandstrom, 2013).

However, this strategy may prove to be a liability as it enters the long-haul market. Without an alliance partner, NAS can only offer a very limited range of destinations at relatively low frequencies. Currently, it offers services to Bangkok and five destinations in the U.S. If it wants to become a significant player in the long-haul market, NAS will need to increase the number of destinations that it serves because consumers demand network scope and depth (Pearce and Doernhoefer, 2011). This is something that is simply impossible for any single airline to provide on long-haul routes, particularly one that is relatively small like NAS.

One of the key strategic benefits of alliances stems from its ability to help airlines overcome the regulatory restraints, such as cabotage and cross-border merger prohibitions that are still prevalent in much of international aviation (Pearce and Doernhoefer, 2011). Even at this early stage of NAS' long-haul expansion, the company has experienced difficulties in gaining an U.S. air carrier permit for Norwegian Air International (Wall and Cameron, 2014). For this reason, Bjørn Kjos has hinted at the possibility that NAS would be willing to cooperate with other LCCs in the U.S. in order to increase its market penetration and avoid these legal issues in the future (Sandstrom, 2013).

## Lack of geographic diversification

In spite of its recent expansion into the long-haul market, NAS' route network lacks geographic diversification. It derives almost all of its revenues from the European market. This can be contrasted with a truly global airline such as Emirates, which in 2012, generated 29% of its revenues from Australia and the Far East, 28% from Europe, and around 10% each from the Middle East, Africa, America and West Asia (Wielgoss et al., 2013).

As a consequence, NAS' future survival is highly contingent upon the maintenance of political and economic stability within the Euro-zone, which is not a guarantee given the perilous fiscal positions of important member countries such as Greece, Spain and Italy.

#### Seasonality

All firms in the airline industry are subject to seasonal variations in income as leisure travellers tend to plan their travel for certain peak times of the year. In NAS' case, January and February are generally months with low levels of demands, which had a negative impact on the airline's revenues. This is reflected in the 2013 Annual Report, where passenger numbers were 3.9 million in the first quarter compared to 6 million in the third quarter. Aircraft utilisation was also lower, at 10.6 hours per day as compared to 12.2 hours.

The seasonal effects on income are compounded for NAS due to its lack of geographic diversity. For airlines such as Emirates and Cathay Pacific, they are able to maintain high load factors and aircraft utilisation all year round by re-deploying resources to other routes throughout their extensive networks.

#### **Insufficient Scale**

Currently, NAS has less than ten Dreamliners in operation. While the company realises that it needs more aircraft in order to achieve good profitability in its long-haul operations, the reality is that there is a high demand for the newest fleet of the Airbus A380 and Boeing Dreamliners from other airlines and there is a long lead time before new aircraft can be delivered (Sandstrom, 2013). In the short-run, the lack of scale severely constrains NAS' ability to grow its long-haul operations beyond the destinations that it is currently servicing and to achieve significant market penetration.

#### Unreliable aircraft

The introduction of the Dreamliner provided the company with more problems than it could possibly have expected. Not only were the first two aircraft delivered several months late, thereby delaying the commencement of NAS' long-haul operations, but when they finally did arrive, the planes lacked the requisite level of dispatch reliability in their first months of operation. More often than not, they were grounded and passengers were forced to fly on replacement aircraft. On one flight from Orlando to Oslo, the delay exceeded 44 hours (Milne, 2014). The unreliability of the aircraft became so problematic that NAS was forced to take the drastic action of de-commissioning one of the two Dreamliners that it had in its fleet (Koranyi, 2013).

Although these issues were beyond the company's control, and affected other airlines using the Dreamliner, it was very costly both in monetary terms as well as the adverse impact it had on consumer satisfaction and the company's reputation as it sought to build a positive brand image to a new customer base.

#### Litigation and Industrial Disputes

In 2014, NAS even faced a lawsuit in Sweden as a result of delays caused by the Dreamliner, with total claims exceeding \$28 million (Zander, 2014a).

Another issue that is a relevant source of disadvantage for NAS is the labour dispute that it has been engaged in with various unions. The dispute with the pilots union has been particularly fierce and forced the company to cancel all Scandinavian flights for a week in March, 2014 before an agreement could finally be reached (Zander, 2014b). In 2015, 700 Scandinavian pilots held an 11-day strike, and affected the travel plans of over 200,000 passengers (Koranyi and Neely, 2015).

Labour disputes are an ever-present risk as the industry remains one of the most unionised in the world with 60% of non-managerial employees in the major airlines being represented by a labour union (Gittell et al., 2004). To overcome this, Ryanair has adopted the drastic measure of unequivocally refusing to negotiate with labour unions. Ryanair's hard-line stance was confirmed when it sacked a pilot for simply handing out a membership form for a union (Penman, 2011).

## 5.4.3. Opportunities

#### **Demand Growth in Passenger Numbers**

Even though the volume of passengers has increased tenfold in the last four decades, three times higher than the rate of world economic growth, there is still huge untapped potential in the civil aviation market (IATA, 2011a; p4). Based on Boeing's Market Outlook for 2014-2033, the projected world GDP growth was 3.2% but for airline traffic was forecast to increase by 5% (Boeing, 2015; p2). This is consistent with historical trends where by growth in air traffic has been a multiple of GDP growth, reflecting the high income elasticity of demand.

Of particular interest to NAS should be the fact that air traffic in the Asia-Pacific, Latin America and the Middle East are all projected to increase by 6% annually (Boeing, 2015; p2). As such, NAS should focus its strategy on the provision of air transport services connecting the growing megacities and populations of those emerging regions as rising incomes will make air travel more affordable to people from a wider range of social, geographic and economic backgrounds (Peterson, 2010). Over time, the division of worldwide traffic will continue to become more evenly distributed as the economic centre of gravity shifts further East and South (Airbus, 2014).

This growth opportunity is further reinforced by the fact that, in ASEAN countries, there were only 775 airlines seats available per 100 head of population in 2013 (Rowland et al., 2014, p3). This was more than four times lower than the U.S., where the figure stood at 3200 seats per 1000 people. Therefore, it is likely that the major source of growth in the future will come from developing countries in Asia and Latin America rather than from the developed regions in Europe and North America. As Noakes (2014) stated, these developing regions possess massive populations with growing affluence and few preconceptions about what air travel ought to be like provide very willing recipients of the LCC business model.

#### **Further Deregulation**

Despite the liberalisation of air travel in the last 40 years, international flights are still governed mostly by a complex web of bilateral air service agreements. In 2013, there were over 2500 bilateral air service agreements (Airbus, 2014; p40). Europe still remains the only region that operates a single

aviation market, though the 10 countries that comprise the ASEAN region have set 2015 as the deadline for the establishment of their single aviation market project (Airline Leader, 2014).

For NAS, the progress of the ASEAN single aviation market will be one worth watching. Currently, it is required to enter into bilateral agreements to fly to most Asian cities from Norway or the EU. Bjørn Kjos has publicly expressed that he is confident that there will be an Open Skies agreement between Asia and Europe in the future to form an extended single aviation market (Sandstrom, 2013). If that prediction comes to fruition, NAS will be perfectly positioned to take advantage of the strategic opportunities presented. As regulatory restrictions continue to be removed, it will act as a catalyst for global air travel expansion.

### **Improved Infrastructure**

Airbus (2014) asserted that the lack of necessary airport infrastructure has thwarted passengers from being able to realise the full benefits resulting from the growth in commercial aviation. There are palpable differences in terms of access to airports in different regions of the world. In North America, there are 2.53 airports per million inhabitants. In India and China, that number falls to 0.08 and 0.13 respectively (Airbus, 2014; p43). Therefore, it is imperative that governments in emerging economies continue to invest in the development of airport infrastructure to ensure that traffic growth can be accommodated in a sustainable manner.

For example, in China, this is a matter of priority for the government, which has set the ambitious target of building 70 new airports by 2020 (Chen et al., 2013). In other parts of Northeast Asia, major airport modernisation projects are also underway. Haneda Airport in Tokyo was recently upgraded to support the expansion of international operations and Seoul's Incheon Airport is undergoing a redesign with the purpose of turning it into a major international hub capable of serving the whole Asia-Pacific region (Boeing, 2015). In 2013, Dubai opened the Al Maktoum Airport. When fully operational, it will be the world's busiest airport, capable of handling 160 million passengers annually (AirGuide, 2013). Overall, CAPA (2015d) estimated that there are over 2300 airport construction projects at various stages of completion worldwide, where the size of the investment varies from \$1 billion to \$20 billion.

#### Sustained Network Expansion

The route network of the world's airlines is constantly in a state of flux as they seek to optimise their network and compete in such a dynamic, but low-profit industry. Important factors in the development of a route network include liberalisation, level of competition, technological developments, tourism trends and government policy (Airbus, 2014). Airline route networks have been expanding rapidly in recent years to keep up with the growing demand by passengers for air travel.

One of the key opportunities that NAS is seeking to tap into is the strong demand for low-cost services that link Europe with North America and Southeast Asia. This is highlighted by the fact that average load factor of NAS' long-haul operations was above 90% in 2013 (Norwegian Annual Report, 2013).

With suggestions that the UK and European markets for LCCs may be reaching saturation point (Tafur et al., 2008; Dennis, 2004a; Wit and Zuidberg, 2012), it is an opportune time for NAS to focus on intercontinental expansion. One of the factors working in its favour is that Europe is located at a key, strategic location in the global aviation network. At present, nearly 50% of all long-haul flights connect through Europe (Airbus, 2014; p109). NAS currently services six long-haul destinations in the U.S. and Thailand. This is an insignificant number when compared to the 130 destinations that exist throughout NAS' entire network. Therefore, the continued expansion of NAS' operations into the long-haul market will be necessary to tap into the lucrative Trans-Atlantic and Asian markets and facilitate greater diversification in its geographic portfolio.

#### 5.4.4. Threats

#### Competitive response in long-haul market

When NAS commenced flights to Bangkok in 2013 it became the 8<sup>th</sup> European carrier, but the first LCC, to serve the Southeast Asian market (CAPA, 2013b). It is also the only LCC providing services from Europe to the North American market.

One of the key factors responsible for the initial success of LCCs was the fact that legacy carriers did not view them as direct competitors based on the mistaken assumption that only a small group of travellers would be willing to switch to LCCs (Lawton, 2002). While NAS' long-haul operations account for only around 1% of the total capacity on routes from Europe to Southeast Asia and the U.S., and are not significant enough to change the complexion of the competitive landscape (CAPA, 2013c), it would behave the legacy airlines to respond aggressively to eliminate the threat before NAS can obtain the necessary scale to become a serious competitor. Given the dire impact that their initial ambivalence had on their market share and profitability in the short-haul market, it would be incomprehensible for legacy carriers to repeat the same mistakes this time around.

Besanko et al. (2013) stated that one of the common competitive responses to the entrance of a new competitor is for the existing firms to add capacity, lower prices and engage in a price war to deplete the resources of the new entrant. This was the fate that ultimately befell SkyTrain as it was unable to compete against the aggressive pricing from legacy airlines (Lawton, 2002). With NAS' main source of competitive advantage being the low fares available on its flights, CAPA (2013c) has found that NAS generates less than half the revenue per passenger on its long-haul routes when compared to other airlines operating the same route. With the company struggling to reduce

operating costs at the same rate as falling revenues, NAS' long-haul operations have been a significant drain on the company's assets and resources, and caused the profitability of the company to deteriorate dramatically (CAPA, 2015e). Therefore any added competitive pressures may prove fatal for the long-term viability of its long-haul operations. After all, other successful LCCs such as Air Asia X have tried and failed to penetrate the European long-haul market.

In addition to strategic responses, rival airlines will also resort to lobbying tactics to impede NAS' entry into the intercontinental market. For example, airlines in the U.S., labour unions and members of Congress have accused NAS of social dumping and being a "flag of convenience" even though the incorporation of Norwegian Air International in Ireland was due to very sound operational reasons; to gain access to the EU-U.S. Open Skies Agreement (CAPA, 2014b; Mouawad, 2014). The fact that NAS will obtain cost savings by using some non-Norwegian crew in its long-haul operations is irrelevant to whether it should be eligible for the U.S. air carrier permit. Despite filing the application in 2013, NAS is still awaiting approval of its application as of December 2014.

The U.S. Department of Transportation's undue delay in making a decision on the matter has even raised concerns among EU regulators, who wholeheartedly believe that NAS is entitled to an air carrier permit under the Open Skies Agreement (Cameron, 2014). After all, every airline tries to minimise costs where possible to ensure that their operations remain economically feasible. It would be absurd if Ryanair, an Irish company at its core, began flights to the U.S. and the same arguments were raised against it.

Even if NAS does manage to fend off the legacy airlines and build a profitable long-haul operation, it will only act as an invitation for other LCCs to rush into the market and potentially erode any competitive advantage that NAS may have established. For example, Ryanair has consistently floated the possibility of expanding into the Trans-Atlantic market with average fares starting from below €100 (CAPA, 2015c). In addition, Lufthansa has announced its intention to launch a low-cost long-haul service under the name "World Wings" in the autumn of 2015, targeting leisure travellers on routes from Europe to North America, Caribbean and Southeast Asia (McWhirter, 2014). Finally, Air Asia X was able to secure a deal for the acquisition of 50 new long-range Airbus A330neo, and it has publicly stated its intention to target the Scandinavian market, thereby directly challenging the routes offered by NAS (Woodgate, 2014). Since it has a much lower CASK than NAS and possesses the key advantage of being able to provide greater onward connections due to its extensive network within Southeast Asia, any re-entry by Air Asia X into the European long-haul market could have dramatic consequences for NAS' long-haul routes to and from its Bangkok base.

### **Dominance of the Large Airline Alliances**

The formation of strategic alliances has been a competitive response employed by legacy carriers with the objective of cutting costs, network expansion and to gain market access (Goetz and Shapiro, 2012). The three largest ones in operation today are OneWorld, Skyteam and Star Alliance. While they cover about 55% of global capacity, they have an even tighter stranglehold on the Trans-Atlantic market, with a combined market share of 87% (Marketline, 2015; p16). Therefore, airlines within these global alliances have the size, scope and motivation to aggressively respond to NAS' entry into the Trans-Atlantic market.

## **Overexpansion**

NAS' rapid ascent into one of the world's largest LCC has been a remarkable success story. From 2007 to 2013, the company generated operating profit well above its peers in the industry. This growth, however, has been funded by hefty capital expenditure. In 2014, NAS' capital investment amounted to 5 billion NOK, and for the sixth time in the last eight years, capital expenditure exceeded operation cash flows (CAPA, 2015e). Its net debt also increased by more than two and a half times from the previous year to 11.3 billion NOK. Therefore, there is a risk of overexpansion that may cause NAS to endure liquidity problems unless its long-haul operations can generate better operational performance going forward.

#### Carrier-within-Carriers

To combat the rising prominence of LCCs, legacy carriers have begun adopting a carrier-within-carrier ("CWC") strategy. It essentially refers to the establishment of a subsidiary with lower unit costs than the parent company to be able to more effectively compete with LCCs on price and defend market share (Lin, 2012). For example, in the Asia-Pacific region, Cathay Pacific (Dragonair), Singapore Airlines (Scoot) and Qantas (Jetstar) all operate low-cost subsidiary airlines. Currently, the CWC concept is being used by over 20 of the world' largest airlines (Whyte and Lohmann, 2015b).

Graham and Vowles (2006) also believed that the CWC strategy can be used aggressively in order to enter new markets and allow the legacy airline to more effectively segment the market according to the predominant type of traveller on any given route.

#### **Industry Consolidation**

One of the new trends evident in the industry has been the consolidation among legacy carriers leading to the formation of mega-airlines (Taneja, 2008a). Examples include the merger between U.S. Airways and American Airlines in 2012, British Airways and Iberia in 2011, and KLM and Air France in 2004. The key motivations for industry consolidation include the desire to combine financial resources, aggressively cut costs and enhance revenue opportunities by combining hubs, routes, and

marketing strategies (Demos, 2007). However, the empirical evidence suggests that the success rate of airline mergers has been mediocre at best as they face a variety of challenges including the ability to effectively integrate different computer systems, business cultures and flight operations (Palmeri, 2005; Brueckner et al., 2010). Indeed, as Tarry (2007) posited, size alone does not provide any guarantee of value or success within the airline industry.

Nevertheless, CAPA (2015f) showed that there is a positive, linear correlation between market concentration and profit margins. Consequently, the more fragmented market in Europe has limited the profitability of airlines in the region. In the most concentrated market, North America, airlines generated an EBIT margin of 8.5% when compared to just 2.5% in Europe.

### Volatility in fuel price

In 2000, the average price of crude oil was \$25 per barrel. By the middle of 2014, it was over \$110, representing a 340% increase (Airbus, 2014; p22). Since the peak of the oil price in 2014, it has fallen almost 60% by the beginning of 2015. Even though the tumbling oil price has proven to be valuable in reducing operating costs, the extensive use of hedging strategies within the industry means that there will be a lag before airlines can fully reap the benefits from such a rapid decline.

Whether the prices remain at these depressed levels or experience a bounce in the near future, the fact remains that fuel is a highly volatile commodity that is a significant expense that airlines have no control over (Friedman, 2015). CAPA (2015g) stated that the oil price outlook is arguably the most important macroeconomic uncertainty facing the airline industry in 2015, and will have a substantial impact on core business strategies as well as operational profitability.

## External events

The geographic dispersion of the global aviation industry means that it is exposed to an extensive range of external factors that have the capacity to affect efficient airline operations, which have little to do with industry structure or corporate strategy. For example, in the aftermath of the September 11 terrorist attacks in 2001, all commercial aircraft were grounded for three days in the U.S. and triggered severe financial distress for most American airlines and a \$5 billion aid package from the U.S. government was required to stabilise the situation (Jang et al., 2011). Many travellers either reduced or avoided travelling altogether as a result of the heightened perception of risk along with the fact that the additional security measures not only added to the cost of travel, but also increased the time and inconvenience for travellers. Pearce (2006a; p1) estimated that in the five months after the attacks, demand reduced by over 30% in the U.S., and the impact of additional security measures permanently reduced air travel demand by around 7% in the long-run.

Medical epidemics have also had significant adverse effects on the financial performance of airlines in the past. When the SARS epidemic hit China in 2003, North American airline bookings to Hong Kong fell by more than 85% and Cathay Pacific reduced its weekly flight frequencies by 45% (Orecklin, 2003). While the epidemic was rather constrained, with less than 800 deaths worldwide, Pearce (2006b; p1) estimated that SARS reduced world GDP by \$33 billion or 0.1%.

When a volcano in Chile erupted in 2011, it sent an ash cloud which circumnavigated the globe and caused airlines to cancel flights on two separate occasions (Taylor and Perry, 2011). The eruption of a volcano in Iceland during 2010 caused an estimated 100,000 flights to be cancelled, at a cost of \$1.7 billion to the affected airlines and leaving up to 10 million passengers stranded (Taylor and Perry, 2011). During the worst days on 18<sup>th</sup> and 19<sup>th</sup> April, almost 30% of global passenger capacity was cancelled (IATA, 2010b; p1).

Other significant events that have markedly disrupted airline activities include the Japanese earthquake in 2011 (IATA, 2011b) and Hurricane Sandy in 2012 (IATA, 2012). Even mundane events such as wind and snow have the ability to ground flights. In light of this, it is clear that the industry is highly susceptible to exogenous shocks which artificially drive down industry profitability.

#### Airport Charges and Air Travel Taxes

When airlines are levied with large airport charges and air travel taxes, it reduces their profitability and has the potential to adversely affect passenger volumes. These taxes and charges represent an unavoidable cost for airlines and are completely out of their control. For example, as NAS continues to expand London Gatwick as a home base, it will be subjected to the UK Air Passenger Duty, which is the world's largest single aviation tax (Tyler, 2014).

In the U.S., the 2014 fiscal budget proposed higher customs fees and passenger facility charges, which would increase aviation taxes by \$5.5 billion over and above the \$19 billion paid by commercial aviation in the prior year (Tyler, 2013; p27). These tax increases reflect the risk that the airline industry is viewed as an important revenue generator for the funding of government budgets.

Finally, IATA (2013; p1) estimated that, in 2011, the use of airports and air navigation infrastructure costed airlines and passengers over \$92 billion, which was equivalent to almost 15% of the cost of air transport. With passengers directly paying 47% of these costs, it demonstrates that these taxes and charges are not only detrimental for the profitability of airlines but also directly increase the cost of air travel.

#### 5.4.5. SWOT Analysis Summary

The key elements of the SWOT analysis are summarised in Figure 23. NAS' core strengths are derived from its high levels of customer service, strong position within the Scandinavian market,

innovation capabilities, competitive low fares and a growing, modern fleet of the newest generation aircraft. By leveraging these strengths, NAS hopes to take advantage of the many opportunities that will be prevalent within the aviation industry as a result of further liberalisation, improvements in infrastructure and sustained growth in passenger numbers and route networks. Many of these opportunities are going to be presented outside of the European market and have been a major motivation for NAS to establish long-haul operations so that the company can be better positioned to satisfy the growing demand for air travel within Latin America and Southeast Asia.

Like every other airline, NAS does suffer from certain weaknesses such as insufficient scale and lack of affiliation with any of the large global airline alliances. These factors constrain its ability to fully capitalise on the future opportunities as it is unable to provide its customers with the level of route coverage and flight frequencies demanded. These weaknesses also make them more susceptible to the threats inherent in the international aviation market such as the fact that an aggressive response by legacy carriers in the long-haul market may drain NAS' financial resources and force them to exit the long-haul market. The trend towards industry consolidation and CWC strategies pose additional threats as it dramatically changes the competitive landscape in which NAS operates and will intensify internal rivalry and place greater pressures on profitability. Finally, while NAS hopes to address its lack of geographic diversification by expanding into the long-haul market, until it is able to achieve sufficient capacity on long-haul routes, it will still be highly vulnerable to external events that occur within the European market, which may result in prolonged disruptions of flight schedules.

Figure 23: SWOT Analysis Summary



Source: Own Creation

### 5.5. VRIO Analysis

As Porter (1996) explained, the essence of strategy rests upon the ability to perform a set of unique activities that set the company apart from its rivals. In this section, a VRIO analysis will be conducted to build upon the previous section by examining NAS' key resources and capabilities, and discussing whether they are capable of providing the company with a source of sustainable competitive advantage.

To do this, the VRIO framework will answer four interconnected questions relating to the strategic resources and capabilities of NAS. The first of which is whether the resources and capabilities have the potential to add value to the company; that is, if they are able to increase a consumer's willingness to pay for a product or service or to reduce the cost of serving customers (Besanko et al., 2013). The second question concerns the rarity of the resource. This criterion will be satisfied so long as the number of firms in possession of the resources is below the number necessary to achieve perfect market efficiency (Barney, 2014). Rarity should not be mistaken for uniqueness. Imitability is at the heart of the third issue. Besanko et al. (2013) outlined several factors which may act as impediments to imitation; legal restriction, superior access to inputs, geographic location closer to end consumers, economies of scale and casual ambiguity, which refers to the fact that it is often difficult to identify the exact causal elements of a firm's success. Finally, NAS must formulate the necessary strategies in order to exploit the resources effectively so that the benefits can be appropriated back into the firm (Barney, 2014).

Table 14 provides an overview of the VRIO framework and how organisational resources can affect a company's competitive position and the subsequent implications for firm performance. Two separate analyses will be conducted to determine whether the competitive advantages enjoyed by the company in the short-haul market are transferrable to its long-haul operations.

Table 14: VRIO Framework: Competitive Implications & Firm Performance

Valuable?	Rare?	Costly to	Exploited by	Competitive Implications	Firm Performance
		Imitate?	Organisation?		
No	No	No	No	Competitive Disadvantage	Below Average
Yes	No	No	Yes	Competitive Parity	Average
Yes	Yes	No	Yes	Temporary Competitive	Above Average
				Advantage	
Yes	Yes	Yes	Yes	Sustained Competitive Advantage	Persistently Above Average

Source: Own Creation, adapted from Barney (2014)

#### 5.5.1. Tangible resources

In terms of NAS' tangible resources, it is in a strong financial position with a relatively clean balance sheet and excellent internal fund generating based on its sustained period of operating profits as well as the 20% ownership stake in Bank Norwegian. The company also possesses physical

resources in the form of its modern fleet, where the average aircraft is less than four years old. With pending orders in excess of 250 aircraft with both Boeing and Airbus, NAS will have a 350-strong fleet once all those orders are fulfilled.

### 5.5.2. Intangible Resources

NAS' intangible resources can be divided into technological innovations and brand reputation. NAS has introduced several technological innovations, which has been able to enhance customer satisfaction. Its in-flight Wi-Fi technology is patented and has been particularly well received by its customers while the simple-to-use website has facilitated an effective Internet sales and distribution channel. As far as NAS' reputation is concerned, it has a strong brand name in Scandinavia, an immaculate safety and the company has been able to foster some brand loyalty through the Norwegian Rewards FFP.

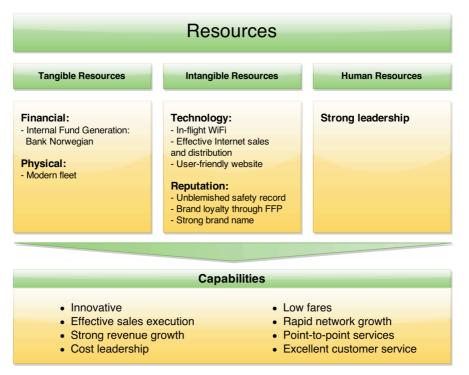
#### 5.5.3. Human Resources

The strong leadership team led by Bjørn Kjos is the key human resource that NAS possesses. Mr. Kjos is an enigmatic leader and the face of the company. The Wall Street Journal even referred to him as the "Norwegian Richard Branson", one of the most successful entrepreneurs of the last century (Sandstrom, 2013).

## 5.5.4. Capabilities

NAS has been able to leverage these resources into a vast array of capabilities that have acted as the impetus for its prolonged period of growth in revenues, route network and fleet size. NAS is also one of the cost leaders within the industry, which has allowed it to offer its passengers with low fares relative to its competitors. Other capabilities include effective sales execution, award-winning customer service and point-to-point flights. Figure 24 outlines NAS' core resources and capabilities.

Figure 24: Key Resources and Capabilities



Source: Own Creation

## 5.5.5. VRIO for Short-Haul Market

#### Sustainable Competitive Advantage

The VRIO analysis in Table 15 below shows that, in NAS' short-haul operations, its strong brand name and leadership provide the company with a source of sustainable competitive advantage. Unlike Ryanair, who have embraced the mantra that any publicity is good publicity, NAS has sought to enhance its brand reputation by fostering positive relationships with all stakeholders, especially customers, employees and the government. Among its LCC peers and within the Scandinavian market, this positive brand image is exceptionally valuable, rare and difficult to imitate.

Under the guidance of Bjørn Kjos, NAS has grown from a fledgling company with a fleet of three aircraft leased from a rival to one of the largest LCC airlines. His leadership skills as well as his strategic acumen have been one of the most critical factors in its success. By seizing upon the void created in the market after SAS acquired Braathens, NAS was able to satisfy the desire by air travellers in the Nordic market for a low-cost alternative to SAS.

### **Temporary Competitive Advantage**

Sources of temporary competitive advantage arise when the resources and capabilities that a firm possesses are valuable and rare, but are capable of being imitated by competitors in the future (Besanko et al., 2013).

In the case of NAS, the level of customer service provided by the company is rare in an industry where the complexity of the operational processes in the provision of air services results in an endless stream of consumer complaints about issues ranging from lost baggage to flight delays and lack of legroom.

When NAS introduced in-flight Wi-Fi on its flights in 2011, it was the first European airline to do so. Even through several years have passed, there are still only a handful of other airlines in the European market that provide this service. Therefore, it is still scarce enough to equip NAS with a source of temporary competitive advantage.

In the LCC segment, few airlines provide travellers with a FFP due to the cost of administering the program. For example, neither of the two largest LCCs in Europe, Ryanair nor EasyJet, have implemented a FFP. However, by rewarding its customers for repeated patronage, NAS is continuing to build brand loyalty and goodwill. Therefore, this is a resource that is both valuable and rare amongst NAS' low-cost peer group.

Table 15: VRIO Analysis for NAS Short-Haul

Resource/Capability	Valuable	Rare	Non-Imitable	Organised	Result
Cost Leadership	✓			✓	Competitive parity
Internal Fund Generation	✓			✓	Competitive parity
Modern Fleet	✓			✓	Competitive parity
Strong Leadership	<b>✓</b>	✓	<b>✓</b>	<b>✓</b>	Sustainable competitive advantage
Customer Service	<b>✓</b>	<b>√</b>		<b>✓</b>	Temporary competitive advantage
Low Fares	✓			✓	Competitive parity
Point-to-Point Services	✓			✓	Competitive parity
In-Flight WiFi	✓	✓		✓	Temporary competitive advantage
Safety Record	<b>✓</b>				Competitive parity
FFP	✓	<b>✓</b>		✓	Temporary competitive advantage
Brand Name	<b>✓</b>	✓	<b>✓</b>	<b>✓</b>	Sustainable competitive advantage

Source: Own Creation

#### 5.5.6. VRIO for Long-Haul Market

This section will focus on how NAS will be able to transfer its competitive advantages in the short-haul markets to the newly-established long-haul operations (see Table 16).

#### **Erosion of Competitive Advantages**

As a new player in the long-haul market, providing infrequent services, NAS has little to no brand recognition in the American or the Southeast Asian market. This means that NAS is back to square one when it comes to building a brand name. Therefore, NAS' brand equity falls from being a source of sustainable competitive advantage in the short-haul market to a competitive disadvantage in the long-haul market.

While NAS' FFP sets it apart from its main competitors in the short-haul market, it fails to do so in the long-haul market. All of the airlines with significant market share on the Europe-U.S. and Europe-Bangkok routes have FFPs of their own. Examples include KLM's "Flying Dutchman," Delta Airlines' "SkyMiles," and Lufthansa's "Miles and More." In fact, it is arguable that the FFP's of those airlines are much more valuable because they all belong to one of the three large global alliances, which means that the points gained on those airlines can be used for flights to a much wider range of destinations than NAS is able to offer. In terms of raw numbers, the number of Norwegian Reward members pales in comparison to the 74 million of Delta Airlines, 72 million of American Airlines and 23 million of Lufthansa (Ernst and Young, 2014; p3).

Since Francis et al. (2007) suggested that travellers tend to be less inclined to forego the benefits associated with FFPs on long-haul flights as the rewards are more valuable, the existence of the Norwegian Reward program helps NAS avoid a significant source of competitive disadvantage in its long-haul operations.

#### **Competitive Developments**

In the short-haul market, NAS' cost base, while low, is not the lowest among its major rivals. However, it is the only LCC that operates long-haul flights into and out of Europe. Therefore, its cost base in much lower than the legacy carriers that it is competing against. This upgrades it from a source of competitive parity to a temporary competitive advantage. However, as discussed earlier, if NAS is able to make its long-haul operations economically viable, there is likely to be an influx of other LCCs into the long-haul market, as there was in the short-haul market after the success of companies such as Southwest, Ryanair and Air Asia. Thus, it is possible that any competitive advantages currently enjoyed by NAS will be rapidly eroded.

In the short-haul market, other airlines are able to match the youth of NAS' fleet. However, the majority of the fleet of legacy airlines along the long-haul routes operate with older generation aircraft that have lower capacity, inferior fuel efficiency and are more costly to operate. For example, NAS' two major competitors in the Nordic region, Finnair and SAS, have average fleet age of 10.5 and 12.1 years respectively (CAPA, 2015h). Since NAS' long-haul routes are only served using Boeing's new-generation Dreamliners, this is a source of temporary competitive advantage until the legacy carriers are able to retire their older aircrafts and replace them with the newer, state-of-the-art planes. However, given that the average lifetime of an aircraft is 22 years, it will take time before legacy carriers are able to phase out all of their older-generation aircraft (Köhler, 2011).

Finally, while many airlines in the short-haul market provide direct services from Scandinavian cities to other destinations within Europe, in the long-haul market, there is a lack of point-to-point services from Scandinavia to Asia and the U.S. Currently, Thai Airways is the only one that provides

such a service to Southeast Asia while United and SAS provide direct services to the U.S., though United only offers these flights during the peak summer months. Therefore, NAS' point-to-point route structure in the long-haul market is a rare capability that provides the company with a source of temporary competitive advantage.

Table 16: VRIO Analysis for NAS Long-Haul

Resource/Capability	Valuable	Rare	Non-Imitable	Organised	Result
Cost Leadership	<b>✓</b>	4		<b>✓</b>	Temporary Competitive Advantage
Internal Fund Generation	✓			✓	Competitive parity
Modern Fleet	✓	÷		✓	Temporary Competitive Advantage
Strong Leadership	<b>√</b>	<b>✓</b>	✓	<b>✓</b>	Sustainable competitive advantage
Customer Service	✓	<b>✓</b>		✓	Temporary competitive advantage
Low Fares	✓			✓	Competitive parity
Point-to-Point Services	✓	+		✓	Temporary competitive advantage
In-Flight WiFi	✓	<b>✓</b>		✓	Temporary competitive advantage
Safety Record	✓				Competitive parity
FFP	<b>✓</b>	×		/	Competitive parity
Brand Name					Competitive Disadvantage

Source: Own Creation

## 5.5.7. VRIO Analysis Summary

This section provided an analysis of how NAS can leverage its resources and capabilities to develop competitive advantages in the short-haul and long-haul markets. Based upon our analysis of the long-haul market, it is evident that NAS possesses a temporary competitive advantage in terms of cost leadership, modern fleet, point-to-point flights, customer service and in-flight Wi-Fi. However, these resources and capabilities are possible for other airlines to imitate and thus, they can be eroded at any time. The only source of sustainable competitive advantage that we found was in the form of the company's strong leadership team. However, while this is difficult for other airlines to imitate, even this could be viewed as fleeting in nature as Bjørn Kjos turns 69 in 2015 and may be approaching the end of his tenure as CEO. If NAS fails to find a successor who is just as charismatic and experienced, it could easily become a source of competitive disadvantage.

In addition, the long-haul operations lost the other source of sustainable competitive advantage from the short-haul operations in the form of the company's brand name and recognition within the European market. Airlines spend significant amounts on marketing campaigns to build their brand name and differentiate their product offerings in spite of the fact that consumers consider all airline seats as virtually interchangeable commodities. That being the case, it adds another layer of complexity to NAS' long-haul operations as it must not only compete with the greater financial resources and route networks of legacy airlines, but also the fact that legacy airlines also possess more valuable brands in the eyes of American and Asian consumers.

#### 6. Recommendations

Since the internal analysis above indicates that NAS may not possess the necessary resources to build a sustainable competitive advantage in the long-haul market as the company is presently constituted, this chapter will provide some recommendations on how to address some of the issues that the company has thus far faced in its long-haul expansion, and operational strategies that it may wish to adopt in order to enhance its chances of success in the future (see Figure 25).

Literature Review

External Analysis

Theoretical Background

PESTLE Porter's Five Forces

SWOT VRIO

Strategic Analysis

Recommendations

Figure 25: Recommendations

Source: Own Creation

#### 6.1. Focus on Underserved Routes

For long-haul routes, Airbus (2014; p49) estimated that the feasibility threshold for airlines is to carry at least 150 passengers per flight but they believe that it is unlikely that the industry will continue to generate route growth at historical trends as long-haul traffic is highly concentrated at existing hubs. Their analysis showed that the 42 megacities in international aviation, those with more than 10,000 daily long-haul passengers, accounted for 94% of all long-haul traffic (Airbus, 2014; p50).

Although that may be true, the empirical evidence of the experience of Asian LCCs demonstrates that there is still potential to stimulate demand. For example, when Scoot began flying to Sydney from Singapore, traffic volume grew by 43% in the subsequent 12 months (Rowland et al., 2014; p8). The effect of Air Asia X was even more pronounced as the Kuala Lumpur to Adelaide route saw growth in traffic of 287%.

Given that 85% of the long-haul market consists of leisure travellers (Sandstrom, 2013), NAS should consider focusing on providing route combinations between cities that have appeal for

European and Scandinavian travellers but are currently underserved by existing carriers or have no long-haul services at all. This will take them out of direct competition with legacy carriers and find a niche market which is not dependent on frequency, and where price is a more important factor in the choice of airlines. Of particular interest to NAS should be the fact that the strongest growth on routes is linked to the Asian region (Pearce, 2014). Therefore, it may seek to focus on expanding its Scandinavia-Asia routes rather than its Trans-Atlantic operations.

In addition, given that there are over 4.5 million people with Norwegian heritage living in the U.S., NAS should focus upon the people visiting friends and family to generate new demand. As a guide, the states with the most number of Norwegian Americans are Minnesota, with over 850,000 while Wisconsin and Washington have more than 400,000 (Census, 2013). These destinations are not served by direct flights from Scandinavia. Moreover, CAPA (2015i) has stated that there are many large U.S. cities and popular tourist destinations that lack direct services to Europe, and especially Scandinavia. As such, it provides a market opportunity for NAS since the routes do not necessarily require high frequencies to be profitable.

## 6.2. Upgrade the Business Class Cabin

While NAS does offer a Premium Class cabin, it is unlikely that it will be able to attract the topend of the market with that product. Not only does it lack the same level of service that other carriers possess, but business travellers will also be wary of the lack of frequency provided by NAS on its long-haul routes. For example, it operates a measly four weekly flights from London to Los Angeles as compared to BA, which has 4 direct departures daily, plus six additional indirect flights. Without sufficient frequencies, it is unlikely that businesses will take the risk of having an important executive stranded on another continent for several days before the next available departure.

In addition, NAS will be hampered by its lack of onward network connections in North America and Asia, a problem that contributed to the failure of Oasis and Maxjet as they were unable to attract the necessary number of business travellers to offset their highly discounted economy fares (Perrett and Flottau, 2008).

Therefore, unless NAS is able to upgrade its business class service, it will be constrained in its capacity to capture the market for business travellers, who account for approximately half of all revenues on the Trans-Atlantic route, despite constituting only 14% of the traffic (CAPA, 2015c). Even Michael O'Leary believes that NAS has erred in failing to offer fully-fledged business class seats on long-haul flights as it is foregoing a massive source of revenue generation that may prove to be impossible to overcome even if the airline is able to continue generate load factors in excess of 90% during peak periods (Economist, 2014; Baldwin, 2014).

#### 6.3. LCC Alliances

Although the most successful LCCs have chosen to grow organically, without the assistance of strategic alliances, the truth is that they are not that uncommon with about one-third of LCCs globally being engaged in some sort of code-sharing agreement in 2011 (Morandi et al., 2015). Code-sharing is a critical tactic in the long-haul market to enhance network coverage while controlling competition and capacity at the route level (Dennis, 2004b). It effectively rationalises long-haul networks by eliminating thin routes served at low frequency in favour of more frequency and capacity to the key hubs.

Given that NAS lacks feed at the non-European end of its long-haul routes, engaging in alliances with other LCCs in North America and the Asia-Pacific has the potential to expand NAS' network coverage, flight frequencies and enhance the potential for establishing a sustainable long-haul operation. JetBlue has already expressed openness towards a potential interlining or code-sharing agreement with NAS (Rowland et al., 2014). The interlining agreement may be particularly beneficial as the experience of Air Asia X and Scoot has shown that the convenience offered by properly structured connections is preferred by passengers as opposed to the logistical hassle associated with self-hubbing (Rowland et al., 2014).

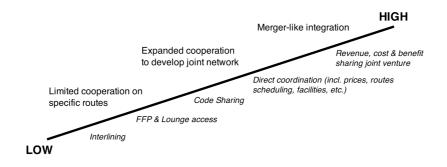
Moreover, if NAS decides to remain unaffiliated, it will likely continue to come up against significant political resistance whenever it enters a new region. One of the key advantages offered by strategic alliances within the airline industry is that it helps to overcome cultural and political boundaries by bypassing the regulatory constraints on market access and foreign ownership that is still prevalent throughout the industry (Doganis, 2001).

If NAS fails to engage in a LCC alliance, its limited long-haul network may compel it to become a niche player that focuses on serving ethnic flows from Scandinavia to North America and leisure travellers during the summer months, which are better able to be sustained on lower frequencies (Dennis, 2004b).

During the formative stages of NAS' short-haul operations, interlining agreements were established with Cimber Sterling and FlyNordic. Therefore, there is precedence for cooperation with other LCCs. Using the Spectrum of Airline Cooperation, we believe that there is no need for NAS to engage in merger-like integration (see Figure 26). There should be just sufficient cooperation to allow NAS long-haul to expand route network and provide connection options for passengers flying from Europe to the U.S. and Asia.

Figure 26: Spectrum of Airline Cooperation

#### The spectrum of airline co-operation



Source: Own Creation, adapted from Pearce and Doernhoefer (2011)

# 6.4. Marketing Strategies

Curry and Gao (2012) found that LCCs have been able to modify customer behaviour by inducing them to accept fewer benefits and service levels in return for lower prices. Nevertheless, Taneja (2008b) believed that the commodity nature of the airline business dictates that airlines must develop a deep understanding of passenger needs and how their priorities are changing, and then incorporate this knowledge into their marketing campaigns in order to increase intention to purchase and create a value proposition that is emotionally appealing.

NAS should stress the uniqueness of its value proposition in the sense that it is able to offer competitive low fares with exceptional service offerings through its award-winning customer service team and in-flight Wi-Fi. Moreover, the company should continue to provide services that are demanded by its customers with schedules that fit their time demands at prices that travellers are able to afford. Of particular interest to NAS is the fact that it has been found that price elasticity is higher on short-haul routes than long-haul routes (Smyth and Pearce, 2008). As such, focusing on gaining a competitive advantage on the basis of price leadership may not be as effective in the long-haul market.

In addition, a study conducted by Jiang (2013) found that assurance; the degree to which travellers feel safe travelling with an airline to be the most important factor for customers flying low-cost long-haul routes with Jetstar and Air Asia X in the Asia-Pacific. This provides a very clear area where NAS can exploit. It has an impeccable safety record, which has not been properly mobilised and appropriated into its marketing strategies yet. If NAS can effectively adapt its marketing strategies to leverage upon the desire of passengers to feel safe, it will be able to gain a potential competitive edge over its competitors.

### 6.5. Anticipate New Rivals

NAS currently enjoys the advantage of being the first mover in the low-cost long-haul market within Europe. However, if it is able to achieve success in the market, there will invariably be imitators and competitors that may be able to match or even beat the fares that it currently offers. Air Asia X is an airline that is currently offering a similar service in the Asia-Pacific and has experience with the low-cost long-haul model. Through the comments of its CEO, Tony Fernandes, Air Asia X has already recognised the opportunities inherent in the Scandinavian market and the demand for affordable holidays to popular Southeast Asian destinations such as Bangkok and Kuala Lumpur (Woodgate, 2014).

Therefore, NAS should come up with contingency plans to ensure that, when other LCCs enter the market, it will be able to adapt its business model successfully to maximise its strengths and ward off rivals from infringing upon its profitability and market share. In such a highly dynamic industry, flexibility is a vital competence that will enhance the long-term competitiveness of NAS. By being agile, NAS will avoid becoming overly dependent on a particular competency, business model or geographic region, which may prove to be extremely detrimental in its plans to expand into the long-haul market as it may blind the company to new opportunities created by changing industry dynamics.

#### 6.6. Grow Revenues and Profits Concurrently

While NAS has been able to constantly grow its revenue streams, 2014 marked a year in which it suffered significant operating losses. Wensveen (2007) stated that, while revenue growth is important, bottom line growth is essential to the survival of any airline. NAS should avoid the mistake of simply focusing on revenue growth while neglecting actual profits or losses. If the company is unable to generate profits from the long-haul operations in the first several years of operation, it should seriously re-evaluate the strategy and decide if continuing to invest in the long-haul operations will be shrewd strategic decision or whether it should cut its losses and refocus the company's strategic direction back onto its core short-haul network.

The checked history of low-cost long-haul airlines provides important lessons for NAS in this regard as many have simply focused on expanding passenger traffic and revenues, while consistently running operating losses. Eventually, those airlines were swallowed up by high debt levels and lack of liquidity. This is important for NAS, whose current ratio, as shown in section 5.2.3., is much weaker than many of its peers, especially Ryanair. This elevates the risks associated with liquidity issues should the performance of the long-haul services continue to fail to meet expectations.

In addition to the failures of low-cost long-haul operators, many established legacy carriers have struggled to make their long-haul operations profitable. For example, QANTAS has persistently generated significant losses in its long-haul operations, only to be propped up by the profits of its domestic network. For the financial year ending June 2014, QANTAS Domestic generated profits of AU\$30 million while QANTAS International suffered a loss of AU\$497 million (QANTAS, 2014).

## 6.7. Controlled Expansion

NAS' order of 222 aircraft in 2012 was the largest in European history and as such, it was able to alleviate fears that the company would be undercapitalised as it continues to expand its route network internationally. However, there is also the risk posed by overexpansion as discussed in section 5.4.4. Therefore, the company must find the right level of critical mass to balance the demand that it expects to generate and the services that it can realistically offer at this relatively early stage of the company's intercontinental growth. Overloading the market with extra capacity would not be a wise strategy as legacy carriers have much bigger financial reserves and may be willing to wage a price war that NAS would be hard pressed to win.

#### 6.8. Leadership

Currently, NAS possesses a strong leadership team, led by Bjørn Kjos. However, he is approaching 70 years old and cannot remain at the helm of NAS into perpetuity. Therefore, the company should start planning for the time when he retires and a new CEO will need to be installed. If the right candidate can be found, whether internally or externally, it will sustain NAS' competitive advantage and position the company to take advantage of future opportunities. However, failure to do so will turn what is currently a source of sustainable competitive advantage into a source of competitive disadvantage and heighten the risks that are prevalent throughout the industry.

Wensveen (2007) used the example of Continental Airlines to emphasise the importance of leadership. The company was turned from one that was bankrupt to one of the most successful airlines in the U.S. market after the management team was restructured with Gordon Bethune instilled as CEO. The new management implemented a set of strategies that maximised its strengths and seized upon the opportunities that the changing dynamics of the industry offered.

#### 6.9. Summary

This Chapter sought to provide a list of recommendations that NAS may consider adopting in order to achieve the same level of success in the long-haul market as it has in the short-haul market. One of the keys is for NAS to remain agile, anticipate new rivals and be willing to adapt its business model to stay ahead of its competitors in the dynamic airline industry. Some strategic decisions that it might make in this regard is to enter into a LCC Alliance to augment its own route network to

provide better onward connections for long-haul travellers, and to focus on the underserved routes between Scandinavia and Asia, which have much lower weekly seat capacities when compared to routes to the U.S. and routes to/from the London base. NAS should also seriously consider upgrading its Premium Class offering to a full Business Class Cabin to capitalise on the revenue streams that business travellers offer on long-haul routes, and to help NAS offset the trend of falling RASK since the introduction of its long-haul operations in 2013.

Other factors that NAS needs to keep in mind are that it should not ignore profitability in this growth phase and that a controlled expansion over a period of several years will provide NAS with a better foundation for success than immediately flooding the market with extra capacity. It is also imperative that NAS develops a suitable succession plan for Bjørn Kjos so that the company can continue to execute his strategic vision even after his inevitable retirement.

#### 7. Conclusion

Given the success that LCCs have achieved in penetrating the market share held by legacy carriers in short-haul markets, a constant source of speculation within the industry has been whether they will be able to translate the same level of success to the long-haul market. Through a case study of NAS, we have sought to provide an insight into the strategies adopted by NAS in its long-haul expansion and whether it has been able to achieve sustainable competitive advantages, through price or its other resources and capabilities.

At the beginning of the thesis, we proposed two main research questions of interest. The first one being: "why has the low-cost business model been so successful in the short-haul market but mostly been a failure in the long-haul market?"

Through the Literature Review Chapter, we found that most previous studies believe that LCCs are not able to achieve the same level of cost advantage in the long-haul market as they have in the short-haul market. In particular, LCCs will have to adapt some of the core features of the low-cost business model to compete effectively along long-haul routes. This includes rearranging the configuration of their aircraft to include premium class cabins, shifting their operations to primary airports that are more congested and charge higher fees for slots, the provision of more frills to avoid disgruntled passengers, adding cargo services to long-haul flights and restructuring of its route network to provide more seamless transfers for long-haul passengers. All of these factors have the effect of reducing aircraft capacity, increasing costs and fundamentally changing the operations of LCCs. As a result, this is a primary reason why most LCCs have sought to grow their routes within the short-haul market and will not expand beyond that until competitive developments compel them to.

In the External Analysis Chapter, we found that the politics and economics of long-haul operations are much more challenging. Even though deregulation has been prevalent throughout the airline industry in the last three decades, international aviation today is still far from being a free market. Regulations still dominate many aspects of the industry through the complex set of bilateral agreements. Political sensitivities dictate that the nationality of airlines still plays an important role in gaining market access and government subsidies. These are issues that LCCs have been fortunate enough to avoid in short-haul routes within the U.S. domestic market and EU Open Aviation Area. Moreover, the high capital costs required to expand into the long-haul market in terms of new airport slots and investment in long-range aircraft as well as the increasing importance of price discrimination means that LCCs must start anew in their quest to challenge the dominance of legacy carriers in the long-haul market. From the perspective of the Porter's Five Forces framework, the higher operating costs associated with labour and fuel, the increased bargaining power of business travellers, and incumbency advantages possessed by legacy carriers make it more difficult for LCCs to penetrate the long-haul market.

Given these obstacles inherent in expanding into the long-haul market, our second research question was: "how does NAS adapt its low-cost business model to gain a sustainable competitive advantage in the long-haul market?"

From the overview of NAS' history, we can see that the company has successfully built its operations since its inception in 1993 to the point where it is the third largest LCC in Europe, behind only Ryanair and EasyJet. It has invested heavily in fleet expansion in recent times to continue to expand its route network and flight frequencies, and catapult the company into the next stage of its expansion plans.

When we look at the financial performance of NAS, it is evident that, in nominal terms, the company has been an above-average performer in the last decade, with consistent profits from 2005 until 2013. However, when we compare its performance with a peer group consisting of Ryanair, EasyJet, Air Berlin and Air Asia X, it is reasonable to conclude that NAS may have rushed into its long-haul expansion as Ryanair and EasyJet are superior performers in terms of liquidity, financial performance and operational efficiency. Yet these two airlines have remained on the sidelines with regards to expanding their networks into the long-haul market. The two LCCs currently commencing long-haul operations, Air Asia X and Air Berlin, have generated negative net profit margins in the last couple of years and have higher CASK than RASK, an indication of negative operating profits. Given that NAS generated a net loss of €126 million in 2014, a figure slightly smaller than the €142 million that the company accrued between 2010 and 2013, it is clear that the long-haul operations have been a drain on the company's resources and a drag on its profitability.

Given the high level of risk involved with this venture, NAS needs to make sure that it adopts the right strategies in order to provide itself with the best chance of success, rather than joining the long list of low-cost failures in the long-haul market. Specifically, NAS focused upon changing a couple of key elements of its short-haul model including the acceptance that cargo and premium class cabins are two important sources of revenue that it cannot ignore in the long-haul market. However, it has stuck with the fare structure inherent in the short-haul market, whereby passengers must pay extra for services that are included in the base fare of legacy carriers. In addition, NAS refuses to provide passengers with connecting services, even onto its own short-haul network in Europe.

From the SWOT analysis, it is evident that NAS possesses a range of strengths that it may leverage in its long-haul expansion such as its cost leadership, in-flight Wi-Fi, brand name and modern fleet. However, when we conducted a VRIO analysis of these resources and capabilities, we found that NAS possessed only one sustainable competitive advantage in the form of the strong leadership provided by Bjørn Kjos. Its other major resources are either sources of temporary competitive advantage or competitive parity. That provides an insufficient foundation for succeeding in the long-haul market as NAS' insufficient scale and lack of affiliation with one of the three major global alliances mean that it is highly vulnerable to an aggressive response by rival airlines and the negative effects of fuel price volatility and external shocks.

#### 7.1. Implications

Given the above analysis, there are several implications that can be drawn from this case study. Firstly, although our price comparison found that NAS has failed to generate a significant price advantage, especially on its LowFare+ product, it has still generated load factor of above 90% on its long-haul routes so far. This shows that there is a strong demand for the services that NAS is providing; a direct service from Scandinavia to the U.S. and Bangkok, routes which are currently underserved by existing carriers. Therefore, NAS might consider abandoning London as a long-haul base as it already possesses sufficient capacity for both leisure and business travellers. Instead, NAS should focus upon serving customers in the Scandinavian market. Routes to the U.S. should target the segment of people who travel to visit friends and family by providing direct services to cities such as Minnesota, while Asian destinations should target leisure travellers.

Secondly, the premium class price analysis showed that NAS' current Premium Economy offering does not provide the company with a point of differentiation as it is not measurably cheaper than the Premium Economy products of rival airlines and does not attract the high margins offered by Business Class cabins. Therefore, we believe that NAS should eschew the current Premium Economy cabin and focus upon providing a product that satisfies the needs of business travellers so

that it is able to benefit from the large revenue streams that business travellers provide. Of course, establishing a client base and building relationships with big business will be a key component in this strategy.

NAS should also seriously consider entering into alliances with other LCCs. As the situation currently stands, NAS cannot provide nearly enough destinations within its long-haul network to be a serious competitor. An alliance in the form of interlining agreements or code-sharing, while increasing administration costs, will immediately increase the size of NAS' international network and make it a much more attractive option for travellers whose final destination is not New York, Bangkok or Los Angeles.

The final key takeaway is that NAS was probably not the ideal candidate to launch such an ambitious expansion plan. The company does not have the level of financial resources or liquidity as other LCCs such as Ryanair to withstand the capital expenditure required and maintain a financial buffer should the initial operations not perform up to expectations. It also lacks the necessary number of long-range aircraft to offer sufficient frequencies and compete effectively in the long-haul market. Therefore, the long-haul operations are very vulnerable to retaliation by legacy airlines and NAS may not be able to withstand a prolonged price or capacity war, nor would it be well-positioned to overcome any unforeseen circumstances such as further delays in the delivery of its Dreamliners.

That is not to say that NAS' long-haul expansion will be a failure. The management team has consistently demonstrated ambitious expansion plans throughout its short history that has served the company well. NAS should be applauded for being forward-thinking and becoming the only LCC to operate low-cost long-haul flights from Europe. However, without a significant price advantage, the odds are well and truly against the company given the weight of history and the fact that legacy carriers will do their utmost to disrupt NAS' entry and dissuade other LCCs from following suit.

### 8. References

- 4-Traders, (2014) "Norwegian Air Shuttle ASA," 4-Traders.com
   http://www.4-traders.com/NORWEGIAN-AIR-SHUTTLE-ASA-1413204/news/Norwegian-Air-Shuttle-ASA--reports-strong-passenger-growth-and-increased-load-factor-in-the-first-q-18392465/
- Abda, M., Belobaba, P., and W. Swelbar, (2012) "Impacts of LCC Growth on Domestic Traffic and Fares at Largest US Airports," *Journal of Air Transport Management*, 18(1), p21-25
- Air Asia Annual Report, (2010) "Air Asia Annual Report: Year 2010," Air Asia
- Air Asia Annual Report, (2011) "Air Asia Annual Report: Year 2011," Air Asia
- Air Asia Annual Report, (2012) "Air Asia Annual Report: Year 2012," Air Asia
- Air Asia Annual Report, (2013) "Air Asia Annual Report: Year 2013," Air Asia
- Air Asia Annual Report, (2014) "Air Asia Annual Report: Year 2014," Air Asia
- Air Berlin Annual Report, (2010) "2010 Annual Report," Air Berlin
- Air Berlin Annual Report, (2011) "2011 Annual Report," Air Berlin
- Air Berlin Annual Report, (2012) "2012 Annual Report," Air Berlin
- Air Berlin Annual Report, (2013) "2013 Annual Report," Air Berlin
- Air Berlin Annual Report, (2014) "2014 Annual Report," Air Berlin
- Airbus, (2014) "Flying on Demand: 2014-2033," Airbus
- AirGuide, (2013) "Dubai's Al Maktoum Airport is Opens to Passengers," *AirGuide for the Frequent Flyer*, November 2013
- Airline Leader, (2014) "As 2015 Nears, ASEAN's Single Aviation Market Must Gear up for New but Harder Phase," Airline Leader, 25 <a href="http://www.airlineleader.com/categories/feature/as-2015-nears-aseans-single-aviation-market-must-gear-up-for-new-but-harder-phase-193965">http://www.airlineleader.com/categories/feature/as-2015-nears-aseans-single-aviation-market-must-gear-up-for-new-but-harder-phase-193965</a>
- Alderighi, M., Cento, A., Nijkamp, P., and P. Rietveld, (2005) "Network Competition The Coexistence of Hub-and-Spoke and Point-to-Point Systems," *Journal of Air Transport Management*, 11, p328-334
- Alderighi, M., Cento, A., Nijkamp, P., and P. Rietveld (2012) "Competition in the European Aviation Market: The Entry of Low-Cost Airlines," *Journal of Transport Geography*, 24, p223-233
- Arjomandi, A., and J. Seufert, (2014) "An Evaluation of the World's Major Airlines' Technical and Environmental Performance," *Economic Modelling*, 41, p133-144
- ATA, (2008) "ATA Airline Handbook," Air Transport Association
- ATW Online, (2015) "ATW Airline Industry Achievement Awards Categories, Criteria, How to Nominate," ATW Online Website
  - http://atwonline.com/atw-airline-industry-achievement-awards-categories-criteria-how-nominate
- Baldwin, M., (2014) "One to One: NAS CEO, Bjørn Kjos," *Aviation Media* http://www.afm.aero/magazine/focus/item/1289-one-to-one-nas-ceo-bjorn-kjos
- Ball, C., (2007) "Rethinking Hub versus Point-Point Competition: A Simple Circular Airline Model," *Journal of Business & Economic Studies*, 13(1), p73-87
- Bank Norwegian, (2014) "Årsrapport 2014," Bank Norwegian AS
- Barney, J., (2014) "Gaining and Sustaining Competitive Advantage," *Pearson: Harlow* (4<sup>th</sup> ed.)
- Barrett, Sean (1989) "Europe's Congested Airspace Time for Market Solutions," *Economic Affairs*, 9(5), p29-31
- Baxter, P., and S. Jack, (2008) "Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers," *The Qualitative Report*, 13(4), p544-559
- Becken, S., (2007) "Tourists' Perception of International Air Travel's Impact on the Global Climate and Potential Climate Change Policies," *Journal of Sustainable Tourism*, 15, 351-368

- Belobaba, P., Odoni, A., and C. Barnhart, (2009) "The Global Airline Industry," Wiley: Chichester
- Berry, S., and P. Jia, (2010) "Tracing the Woes: An Empirical Analysis of the Airline Industry," American Economic Journal: Microeconomics, 2, p1-43
- Besanko, D., Dranove, D., Shanley, M., and S. Schaefer, (2013) "Economics of Strategy," Wiley: Hoboken, N.J.
- Blakey, S., Rye, L., and C. Wilson, (2011) "Aviation Gas Turbine Alternative Fuels: A Review," *Proceedings of the Combustion Institute*, 33, p2863-2885
- Boarding, (2009) "Bjørn Kjos er Norges Beste Vekstskaper," *Boarding.no* http://www.boarding.no/art.asp?id=39187
- Boeing, (2014) "World Air Cargo Forecast,: 2014-2015," Boeing Corporation
- Boeing, (2015) "Current Market Outlook: 2014-2033," Boeing Corporation
- Bromley, D., (1990) "Academic Contributions to Psychological Counselling: I. A Philosophy of Science for the Study of Individual Cases," *Counselling Psychology Quarterly*, 3(3), p299-307
- Brueckner, J., Lee, D., and E. Singer, (2010) "Network vs. LCC Competition and Airfares: New Empirical Evidence from the US," *IATA*
- Brüggen, A., and L. Klose, (2010) "How Fleet Commonality Influences Low-Cost Airline Operating Performance: Empirical Evidence," *Journal of Air Transport Management*, 16, p299-303
- Bryan, D., and M. O'Kelly, (1999) "Hub-and-Spoke Networks in Air Transportation: An Empirical Review," *Journal of Regional Science*, 39(2), p275-295
- Bryman, A., and E. Bell, (2011) "Business Research Methods," Oxford University Press: Oxford (3rd ed.)
- Budd, J., Francis, G., Humphreys, I., and S. Ison, (2014) "Grounded: Characterising the Market Exit of European Low Cost Airlines," *Journal of Air Transport Management*, 34, p78-85
- Buhalis, D., (2004) "eAirlines: Strategic and Tactical Use of ICTs in the Airline Industry," Information & Management, 41(7). P805-825
- Business Traveller, (2012) "Air Asia X to Withdraw London Flights," Business Traveller (UK/Europe Edition), p8
- Button, Kenneth, (2004) "Wings Across Europe," Ashgate: Aldershot
- Button, K., and E. Pels, (2010) "International Air Transport: The Impact of Globalisation on Activity Levels," in OECD, *Globalisation, Transport and the Environment*, OECD Publishing
- Button, K., Costa, A., and C. Cruz, (2007) "Ability to Recover Full Costs through Price Discrimination in Deregulated Schedule Air Transport Markets," *Transport Review*, 27(2), p213-230
- CAA, (2014) "Summary of Activity at Reporting Airports: 2014," Civil Aviation Authority (UK)
- Cameron, D., (2014) "U.S., EU to Discuss Norwegian Air Plan for Trans-Atlantic Flights," Wall Street Journal, July 11, 2014
- CAPA, (2013a) "US Ultra Low-Cost Airlines Capitalise on Opportunities Created by Consolidation: Part 1," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/us-ultra-low-cost-airlines-capitalise-on-opportunities-created-by-consolidation-part-1-115834">http://centreforaviation.com/analysis/us-ultra-low-cost-airlines-capitalise-on-opportunities-created-by-consolidation-part-1-115834</a>
- CAPA, (2013b) "Norwegian Air's Move into Southeast Asia Intensifies European Airline Competition," CAPA Centre for Aviation
   http://centreforaviation.com/analysis/norwegian-airs-move-into-southeast-asia-intensifies-european-airline-competition-119836
- CAPA, (2013c) "Norwegian Air Shuttle: Asia's Longhaul LCC Model Comes to the N Atlantic (but watch falling profits)," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/norwegian-air-shuttle-asias-longhaul-lcc-model-comes-to-the-n-atlantic-but-watch-falling-profits-135816">http://centreforaviation.com/analysis/norwegian-air-shuttle-asias-longhaul-lcc-model-comes-to-the-n-atlantic-but-watch-falling-profits-135816</a>

- CAPA, (2014a) "Air Cargo: Few Other Industries Would Tolerate its Structural Overcapacity,"
   CAPA Centre for Aviation
  - http://centreforaviation.com/analysis/air-cargo-few-other-industries-would-tolerate-its-structural-overcapacity-192139
- CAPA, (2014b) "Norwegian Air Shuttle's Long-Haul Business Model: 'Flag of Convenience' or Fair Competition?," CAPA Centre for Aviation
  - http://centreforaviation.com/analysis/norwegian-air-shuttles-long-haul-business-model-flag-of-convenience-or-fair-competition-146928
- CAPA, (2015a) "Airlines in Transition," CAPA Airline Leader, Issue 28
- CAPA, (2015b) "Norwegian Air Shuttle Narrows is 1Q2015 Loss Thanks to Lower Fuel, But It's Still a Heavy Loss," CAPA Centre for Aviation
   <a href="http://centreforaviation.com/analysis/norwegian-air-shuttle-narrows-its-1q2015-loss-thanks-to-lower-fuel-but-its-still-a-heavy-loss-222125">http://centreforaviation.com/analysis/norwegian-air-shuttle-narrows-its-1q2015-loss-thanks-to-lower-fuel-but-its-still-a-heavy-loss-222125</a>
- CAPA, (2015c) "O'Leary: Ryanair-Style Atlantic Long Haul LCC: Average Fares Below EUR100? Stansted Likely Airport," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/oleary-ryanair-style-atlantic-long-haul-lcc-average-fares-below-eur100-stansted-likely-airport-206895">http://centreforaviation.com/analysis/oleary-ryanair-style-atlantic-long-haul-lcc-average-fares-below-eur100-stansted-likely-airport-206895</a>
- CAPA, (2015d) "The World's Biggest Airport Construction Projects 2015; Total Value over USD500 Billion, Part 1," CAPA Centre for Aviation
   http://centreforaviation.com/analysis/the-worlds-biggest-airport-construction-projects-2015-total-value-over-usd500-billion-part-1-205200
- CAPA, (2015e) "Norwegian Air Shuttle: 2014's Heavy Losses and Record Debt Place the Focus on Growth and Costs," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/norwegian-air-shuttle-2014s-heavy-losses-and-record-debt-place-the-focus-on-growth-and-costs-209759">http://centreforaviation.com/analysis/norwegian-air-shuttle-2014s-heavy-losses-and-record-debt-place-the-focus-on-growth-and-costs-209759</a>
- CAPA, (2015f) "Europe's Airlines Underachieve in Profit Margins, but LCCs typically perform better than FSCs," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/europes-airlines-underachieve-in-profit-margins-but-lccs-typically-perform-better-than-fscs-217527">http://centreforaviation.com/analysis/europes-airlines-underachieve-in-profit-margins-but-lccs-typically-perform-better-than-fscs-217527</a>
- CAPA, (2015g) "Global Aviation Outlook 2015: A Year When Everyone Can Make Money," CAPA Airline Leader, Issue 26
- CAPA, (2015h) "SAS Scandinavian Airlines vs Finnair: The Original Europe-Asia Nordic Leader Tries to Fight Back," CAPA Centre for Aviation <a href="http://centreforaviation.com/analysis/sas-scandinavian-airlines-vs-finnair-the-original-europe-asia-nordic-leader-tries-to-fight-back-214963">http://centreforaviation.com/analysis/sas-scandinavian-airlines-vs-finnair-the-original-europe-asia-nordic-leader-tries-to-fight-back-214963</a>
- CAPA, (2015i) "Market Analysis: Americas," CAPA Airline Leader, Issue 27
- Cargo Forwarder, (2015) "Norwegian Taps Into Cargo," Cargo Forwarder http://www.cargoforwarder.net/article.php?id=527
- Census, (2013) "Total Ancestry Reports; 2013 ACS 5-Year Estimates," United States Census Bureau http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\_13\_5 YR\_B04003&prodType=table
- Chen, Y., Matzinger, S., and J. Woetzel, (2013) "Chinese Infrastructure: The Big Picture," *McKinsey Quarterly*, 3
- Chuck, C., and J. Donnelly, (2014) "The Compatibility of Potential Bioderived Fuels with Jet A-1 Aviation Kerosene," *Applied Energy*, 118, p83-91
- Clewlow, R., Sussman, J., and H. Balakrishnan, (2014) "The Impact of High-Speed Rail and Low-Cost Carriers on European Air Passenger Traffic," *Transport Policy*, 33, p136-143

- Cosmas, A., Belobaba, P., and W. Swelbar, (2008) "Framing the Discussion on Regulatory Liberalisation: A Stakeholder Analysis of Open Skies, Ownership and Control," MIT International Centre for Air Transportation White Paper, p1-18
- Crook, R., and J. Combs, (2007) "Sources and Consequences of Bargaining Power in Supply Chains," *Journal of Operations Management*, 25, p546-555
- Curry, N., and Y. Gao, (2012) "Low-Cost Airlines A New Customer Relationship? An Analysis
  of Service Quality, Service Satisfaction, and Customer Loyalty in a Low-Cost Setting," Services
  Marketing Quarterly, 33, p104-118
- Daft, J., and S. Albers, (2012) "A Profitability Analysis of Low-Cost Long-Haul Flight Operations," *Journal of Air Transport Management*, 19, p49-54
- Demos, Telis, (2007) "Why Merger Mania is Set to Sweep the Airline Biz," Fortune, 155(1)
- Dennis, N., (2004a) "Can the European Low-Cost Airline Boom Continue? Implications for Regional Airports," ERSA Conference Papers: 2004
- Dennis, N., (2004b) "Can the European Low-Cost Airline Boom Continue? Implications for Regional Airports," ERSA Conference Papers: 2004
- Dennis, N., (2007) "Competition and Change in the Long-Haul Markets from Europe," *Journal of Air Transportation*, 12(2), p4-26
- Denstadli, J., (2004) "Impacts of Videoconferencing on Business Travel," *Journal of Air Transport Management*, 10, p371-376
- Denzin, N., and Y. Lincoln, (2000) "Handbook of Qualitative Research," *Sage: Thousand Oakes, California* (2<sup>nd</sup> ed.)
- Diaconu, L., (2012) "The Impact of the Economic Crises from the XXIst Century on the European Low-Csot Airlines' Market," *The USV Annals of Economics and Public Administration*," 12(1), p91-98
- Dipendra, Sinha, (2001) "Deregulation and Liberalisation of the Airline Industry: Asia, Europe, North America and Oceania," *Ashgate: Aldershot*
- Dobruszkes, F., (2013) "The Geography of European Low-Cost Airline Networks: A Contemporary Analysis," *Journal of Transport Geography*, 28, p75-88
- Doganis, Rigas (2001) "The Airline Business in the 21st Century," Routledge: New York
- Doganis, Rigas (2010) "Flying Off Course: The Economics of International Airlines," Routledge: London (4<sup>th</sup> ed.)
- EasyJet Annual Report (2010) "Annual Report and Accounts 2010," EasyJet PLC
- EasyJet Annual Report (2011) "Annual Report and Accounts 2011," EasyJet PLC
- EasyJet Annual Report (2012) "Annual Report and Accounts 2012," EasyJet PLC
- EasyJet Annual Report (2013) "Annual Report and Accounts 2013," EasyJet PLC
- EasyJet Annual Report (2014) "Annual Report and Accounts 2014," EasyJet PLC
- Economist, (2014) "Making Laker's Dream Come True," *The Economist* <a href="http://www.economist.com/news/business/21635001-low-cost-airlines-have-revolutionised-short-haul-flying-now-after-several-failed-attempts">http://www.economist.com/news/business/21635001-low-cost-airlines-have-revolutionised-short-haul-flying-now-after-several-failed-attempts</a>
- Edwards, D., (2007) "Parochialism in International Aviation: The Paradox of Airline Ownership and Control," IATA Key Policy Issue (January 2007)
- Eisenhardt, K., (1989) "Building Theories from Case Study Research," *Academy of Management Review*, 14(4), p532-550
- Eisenhardt, K., (1991) "Better Stories and Better Constructs: The Case for Rigor and Comparative Logic," *Academy of Management Review*, 16(3), p620-627
- Ernst and Young (2014) "Frequent Flyer Program: Ready for Take-Off," Ernst & Young Advisory
- Finger, M., Bert, N., and D. Kupfer, (2014) "High-Speed Rail vs. Low-Cost Air: Competing or Complementary Modes?" 2<sup>nd</sup> European Intermodal Transport Regulation Summary

- Francis, G., Dennis, N., Ison, S., and I. Humphreys, (2007) "The Transferability of the Low-Cost Model to Long-Haul Airline Operations," *Tourism Management*, 28, p391-398
- Franke, K., and F. John, (2011) "What Comes Next After Recession? Airline Industry Scenarios and Potential End Games," *Journal of Air Transport Management*, 17, p19-26
- Friedman, N., (2015) "U.S. Oil Prices Erase Losses After Fed Statement," Wall Street Journal
- GAO, (2009) "High Speed Passenger Rail: Future Development Will Depend on Addressing Financial and Other Challenges and Establishing a Clear Federal Role," *United States Government Accountability Office*
- GAO, (2010) "Consumers Could Benefit from Better Information About Airline-Imposed Fees and Refundability of Government-Imposed Taxes and Fees," *United States Government Accountability Office*
- Gegg, P., Budd, L., and S. Ison, (2014) "The Market Development of Aviation Biofuel: Drivers and Constraints," *Journal of Air Transport Management*, 39, p34-40
- Gibson, W., (2008) "Aircraft Lessor Prospects and Lease Valuation for Airlines," *IATA Key Policy Issue (October, 2008)*
- Gibson, C., (2009) "Financial Statement Analysis: Using Financial Accounting Information," South Western: Cincinnati, Ohio (7<sup>th</sup> ed.)
- Gillen, D., and W. Morrison, (2005) "Regulation, Competition and Network Evolution in Aviation," *Journal of Air Transport Management*, 11, p161-174
- Gittell, Jody, (2005) "The Southwest Airlines Way: Using the Power of Relationships to Achieve High Performance," McGraw-Hill: New York
- Gittell, J., Von Nordenflycht, A., and T. Kochnan, (2004) "Mutual Gains or Zero Sum? Labor Relations and Firm Performance in the Airline Industry," *Industrial & Labor Relations Review,*" 57(2), p163-180
- Godvindasamy, S., (2012) "Who's Got the Load Factor?" Airline Business, 28(5)
- Goetz, C., and A. Shapiro, (2012) "Strategic Alliance as a Response to the Threat of Entry: Evidence from Airline Codesharing," *International Journal of Industrial Organization*, 30(6), p735-747
- Goldsbee, A., and C. Syverson, (2008) "How Do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines," *Quarterly Journal of Economics*, 123(4), p1611-1633
- Gössling,S., (2009) "Carbon Neutral Destinations: A Conceptual Analysis," *Journal of Sustainable Tourism*, 17(1), p17-37
- Graham, A., (2013) "Understanding the Low Cost Carrier and Airport Relationship: A Critical Analysis of the Salient Issues," *Tourism Management*, 36, p66-76
- Graham, B., and T. Vowles, (2006) "Carrier within Carriers: A Strategic Response to Low-Cost Airline Comeptition," *Transportation Reviews*, 26(1), p105-126
- Gray, C., (2009) "Zoom Airline Could Fly Again," Travel Trade Gazette UK & Ireland, 2/6/2009, 2852, p6
- Gudmundsson, Sveinn, (1998) "New-Entrant Airlines' Life-Cycle Analysis: Growth, Decline and Collapse," *Journal of Air Transport Management*, 4(4), p217-228
- Hancioglu, B., (2008) "The Market Power of Airports, Regulatory Issues and Competition Between Airports," German Airport Performance
- Hares, A., Dickinson, J., and L. Wilkes, (2010) "Climate Change and the Air Travel Decisions of UK Tourists," *Journal of Transport Geography*, 18(3), p466-473
- Henry, A., (2008) "Understanding Strategic Management," Oxford University Press: Oxford
- Heskett, James, Jones, Thomas, Loveman, Thomas, Sasser Jr., Earl, and Leonard Schlesinger, (2008) "Putting the Service-Profit Chain to Work," *Harvard Business Review*, 86(7/8) p118-129

- Higham, J., and S. Cohen, (2011) "Canary in the Coalmine: Norwegian Attitudes Towards Climate Change and Extreme Long-Haul Air Travel to Aotearoa/New Zealand," *Tourism Management*, 32, p98-105
- Hirsch, B., (2007) "Unions and Wages in the US Airline Industry," IATA Key Policy Issue
- Ho, R., (2013) "In For the Long Haul," Business Traveller (Asia-Pacific Edition), April 2013, p38-42
- Huse, C., and F. Evangelho, (2007) "Investigating Business Traveller Heterogeneity: Low-Cost vs Full-Service Airline Users?" *Transportation Research Part E*, 43, p259-268
- IATA, (2006) "Profitability: Does Size Matter?" IATA Economics Briefing (June 2006)
- IATA, (2010a) "Airline Fuel and Labour Cost Share," IATA Economic Briefing (February, 2010)
- IATA, (2010b) "The Impact of Eyjafjallajokull's Volcanic Ash Plume," IATA Economic Briefing (May 2010)
- IATA, (2011a) "Vision: 2050," *IATA*
- IATA, (2011b) "The 11 March Japan Earthquake: Estimating the Economic Cost," IATA
- IATA, (2012) "The Impact of Hurricane Sandy," IATA Economic Briefing (November 2012)
- IATA, (2014a) "Fact Sheet: Industry Statistics," *IATA* <a href="http://www.iata.org/pressroom/facts\_figures/fact\_sheets/Documents/industry-facts.pdf">http://www.iata.org/pressroom/facts\_figures/fact\_sheets/Documents/industry-facts.pdf</a>
- IATA, (2014b) "Economic Performance of the Airline Industry: 2014 End-Year Report," IATA
- IATA (2015) "IATA Releases 2014 Safety Performance," *IATA* http://www.iata.org/pressroom/pr/Pages/2015-03-09-01.aspx
- Iatrou, K., and M. Oretti (2007) "Airline Choices for the Future: From Alliances to Mergers,"
   *Abingdon, Oxon, GBR: Ashgate Publishing Group*
- IdeaWorks, (2014) "2013 Airline Ancillary Revenue Lifts to \$31.5 Billion Up Nearly 1200% Since 2007," *IdeaWorks Company Press Release 16 July 2014*
- Israel, M., (2014a) "International Low-Cost Airline Market Research," *Airline Profiler* http://www.airlineprofiler.eu/2014/07/international-low-cost-airline-market-research
- Israel, M., (2014b) "Business Traveler's Satisfactory Report 2014," Airline Profiler http://www.airlineprofiler.eu/2014/06/cosyreport2014
- Israel, M., (2015) "Low Cost Business Model for Long-Haul Sectors," *Airline Profiler* http://www.airlineprofiler.eu/2015/02/low-cost-business-model-for-long-haul-sectors
- Jang, S., Choi, K., and K. Lee, (2011) "External Shocks and Efficiency Changes in the US Airline Industry," *The Service Industries Journal*, 31(14), p2411-2435
- Jiang, J., (2013) "Service Quality of Low-Cost Long-Haul Airlines The Case of Jetstar Airways and AirAsia X," *Journal of Air Transport Management*, 26, p20-24
- Jick, T., (1979) "Mixing Qualitative and Quantitative Methods: Triangulation in Action," Administrative Science Quarterly, 24, p602-611
- Klophaus, R., Conrady, R., and F. Fichert, (2012) "Low Cost Carriers Going Hybrid: Evidence from Europe," *Journal of Air Transport Management*, 23, p54-58
- Knibb, D., (2015) "Closed or Open Skies?" Airline Business, 31(2)
- Köhler, J., (2011) "Case Study and Contrasting Scenarios of International Transport Fulfilling Objectives of Sustainable Development," *EU GLOBIS Project D 12*
- Koranyi, B., (2013) "Norwegian Air Takes Dreamliner Out of Service after Breakdowns," Reuters, 28/09/13
- Koranyi, B., and J. Neely, (2015) "Norwegian Air Passenger Numbers Drop for First Time," Reuters, 10/04/15 http://uk.reuters.com/article/2015/04/10/norwegian-air-strike-idUKL5N0X70PM20150410
- Lawton, T., (2002) "Cleared for Take-Off: Structure and Strategy in the Low Fare Airline Business," *Ashgate: Aldershot*

- Lennane, A., (2013) "Low-Cost Cargo Entrant Vows to Hold the Line on Freight Rates," *The Loadstar* 
  - http://theloadstar.co.uk/low-cost-air-cargo-entrant-vows-to-hold-the-line-on-freight-rates
- Lewis, I., and A. Talalayevsky (1997) "Travel Agents: Threatened Intermediaries?" *Transportation Journal*, 36(3), p26-30
- Lian, J., and J. Denstadli, (2004) "Norwegian Business Air Travel-Segments and Trends," *Journal of Air Transport Management*, 10, p109-118
- Lin, M., (2012) "Airlines-with-Airlines Strategies and Existence of Low-Cost Carriers," Transportation Research Part E., 48, p637-651
- Lyth, P., (1993) "The History of Commercial Air Transport," Journal of Transport Hsitory," 14(2), p166-180
- Maertens, S., (2007) "New Developments in the Longhaul Air Travel Market A Discussion of the Market Potential of Secondary Airports," 2007 World Conference of Air Transport Research Society in UC-Berkeley, California
- Mallin, C., (2010) "Corporate Governance," Oxford University Press: Oxford (3<sup>rd</sup> ed.)
- Mancilla, D., (2009) "Aircraft Financing: The Emergence of China," *LATA Key Policy Issue* (November 2009)
- Marketline, (2012) "Company Profile: Norwegian Air Shuttle ASA," Marketline
- Marketline, (2014) "Marketline Industry Profile: Airlines in Norway," Marketline
- Marketline, (2015) "Company Profile: Norwegian Air Shuttle ASA," Marketline
- Martin, J., Roman, C., and R. Espino, (2008) "Willingness to Pay for Airline Service Quality," Transport Review, 29, p199-217
- Maslen, R., (2013) "Norwegian Boosts Long-Haul Flight Offering," Routes Online <a href="http://www.routesonline.com/news/29/breaking-news/216533/norwegian-boosts-long-haul-flight-offering/?highlight=norwegian%20long%20haul">http://www.routesonline.com/news/29/breaking-news/216533/norwegian-boosts-long-haul-flight-offering/?highlight=norwegian%20long%20haul</a>
- McDonnell, G., (2015) "What Caused Airline Deregulation: Economists or Economics?" Independent Review, 19(3), p379-395
- McWhirter, A., (2014) "Will Lufthansa Succeed with Low-Cost Long-Haul?" Business Traveller 19/09/2014
- Miles, M., (2014) "Qualitative Data Analysis: A Methods Sourcebook," Sage: Los Angeles (3rd ed.)
- Miles, M., and A. Huberman, (1994) "Qualitative Data Analysis An Expanded Sourcebook," Sage: Newbury Park, California
- Milne, Richard, (2014) "Norwegian Air Shuttle Retains Hope of Living the Dream," Financial Times, 13/07/14
- Mojsoski, D., (2014) "Liberalization of the International Air Transport: It's Role in the Growth of the Air Travel and the Economic Effects," *Economic Development*, 1-2, p91-106
- Monteiro, L., (1998) "The Strategic Use of Information in the Airline Industry," Warwick Business School (PhD Thesis)
- Morandi, V., Paleari, S., Redondi, R., and P. Malighetti, (2014) "EU-US Open Skies Agreement: What is Changed in the North Transatlantic Skies?" *Transportation Journal*, 53(3), p305-329
- Morandi, V., Paleari, S., Redondi, R., and P. Malighetti, (2015) "Codesharing Agreements by Low-Cost Carriers: An Explorative Analysis," *Journal of Air Transport Management*, 42, p184-191
- Morrell, P., (2008) "Can Long-Haul Low-Cost Airlines be Successful?" Research in Transportation Economics, 24(1), p61-67
- Mouawad, J., (2014) "Long-Haul Expansion by a Norwegian Carrier Upsets U.S. Airlines," NY Times, 06/02/14
  - http://www.nytimes.com/2014/02/07/business/international/long-haul-expansion-by-anorwegian-carrier-upsets-us-airlines.html?\_r=0

- Neal, Z., and E. Kassens-Noor, (2011) "The Business Passenger Niche: Comparing Legacy Carriers and Southwest During a National Recession," *Journal of Air Transport Management*, 17, p231-232
- Noakes, Gary, (2013) "Powering up for the Long-Haul Challenge," *Travel Trade Gazette UK & Ireland*, 3072, p12-13
- Noakes, G., (2014) "What Future for Low-Cost Long-Haul?" *Buying Business Travel* http://buyingbusinesstravel.com/feature/1023378-will-low-cost-long-haul-work-business-travel
- Nortrade, (2015) "Export Credit Norway," http://www.nortrade.com/sectors/publications/export-credit-norway-/
- Norwegian Annual Report, (2010) "Norwegian Air Shuttle ASA: Annual Report 2010," Norwegian Air Shuttle ASA
- Norwegian Annual Report, (2011) "Norwegian Air Shuttle ASA: Annual Report 2011," Norwegian Air Shuttle ASA
- Norwegian Annual Report, (2012) "Norwegian Air Shuttle ASA: Annual Report 2012," Norwegian Air Shuttle ASA
- Norwegian Annual Report, (2013) "Norwegian Air Shuttle ASA: Annual Report 2013," Norwegian Air Shuttle ASA
- Norwegian Annual Report, (2014) "Norwegian Air Shuttle ASA: Annual Report 2013," Norwegian Air Shuttle ASA
- Norwegian Cargo, (2015) "Our Product," Norwegian Cargo Official Website https://www.norwegiancargo.com/uk/our-services/our-product/
- O'Connell, J., (2007) "The Strategic Response for Full Service Airlines to the Low Cost Carrier Threat and the Perception of Passengers to Each Type of Carrier," *Cranfield University (PhD Thesis)*
- O'Connell, J., and G. Williams, (2005) "Passengers' Perceptions of Low Cost Airlines and Full Service Carriers: A Case Study Involving Ryanair, Aer Lingus, Air Asia and Malaysia Airlines," Journal of Air Transport Management, 11, p259-272
- Oercklin, M., (2003) "The Surprising Impact of SARS," *Time International*, 161(18)
- Onions, E., (2014) "Can Norwegian Air Shuttle Break the Barrier of Budget Long Haul Flights from UK," Budget Airline Watch http://budgetairlinewatch.com/?p=2687
- Oxford Economics, (2010) "The Travel Gold Rush: 2020," Oxford Economics & Amadeus
- Palmeri, Christopher, (2005) "Takeoff for Airline Mergers?" Business Week Online
- Parkhe, A., (1993) "Messy Research, Methodological Predispositions and Theory Development in International Joint Ventures," *Academy of Management Review*, 18(2), p227-268
- Patton, M., (1990) "Qualitative Evaluation and Research Methods," Sage: Newbury Park (2<sup>nd</sup> ed.)
- Pearce, B., (2006a) "The Impact of the 9/11 Terrorist Attacks," *LATA Economics Briefing (2<sup>nd</sup> May 2006)*
- Pearce, B., (2006b) "Avian Flu," IATA Economics Briefing (May 2006)
- Pearce, B., (2013) "Profitability and the Air Transport Value Chain," IATA Economics Briefing
- Pearce, B., (2014) "Economic Performance of the Airline Industry," IATA
- Pearce, B., and G. Doernhoefer (2011) "The Economic Benefits Generated by Alliances and Joint Ventures," *IATA Economics Briefing* (28th November 2011)
- Peng, M., (2010) "Global Business," Renmin University Press (2<sup>nd</sup> ed.)
- Penman, (2011) "Ryanair Pilot Sacked for Handing out Union Form Wins Compensation," The Daily Mirror, 23/11/11
  - http://blogs.mirror.co.uk/investigations/2011/03/ryanair-pilot-sacked-for-handi.html
- Perrett, B., and J. Flottau, (2008) "Oasis Dries Up," Aviation Week and Space Technology, 168(15)

- Perry, C., (1998) "Processes of a Case Study Methodology for Postgraduate Research in Marketing," European Journal of Marketing, 32(9/10), p785-802
- Peterson, Steven, (2010) "Airlines 2020: Substitution and Commoditization," *IBM Institute for Business Value*
- Polk, A., and V. Bilotkach, (2013) "The Assessment of Market Power at Hub Airports," *Transport Policy*, 29, p29-37
- Poon, T., and P. Waring, (2010) "The Lowest of Low-Cost Carriers: The Case of Air Asia," *International Journal of Human Resource Management*, 21(2), p197-213
- Porter, Michael, (1996) "What is Strategy?" Harvard Business Review, 74(6), p61-78
- Porter, Michael, (2008) "The Five Competitive Forces that Shape Strategy," *Harvard Business Review*, 86(1), p78-93
- QANTAS, (2014) "QANTAS Airways Limited and Its Controlled Entities: Preliminary Final Report for the Financial Year Ended 30 June 2014," *Qantas Airways Limited*
- Rose, N., (2012) "In Remembrance of Alfred E. Kahn: Fred Kahn's Impact on Deregulation and Regulatory Reform," *American Economic Review: Papers and Proceedings 2012*, 102(3), p376-380
- Rowland, B., Fulton, D., and M. Clarkson, (2014) "Generation X: Long Haul Low Cost Comes of Age," OAG Aviation Worldwide Ltd.
- Ryanair Annual Report (2010) "Final Annual Report: 2010," Ryanair
- Ryanair Annual Report (2010) "Final Annual Report: 2011," Ryanair
- Ryanair Annual Report (2010) "Final Annual Report: 2012," Ryanair
- Ryanair Annual Report (2010) "Final Annual Report: 2013," Ryanair
- Ryanair Annual Report (2010) "Final Annual Report: 2014," Ryanair
- Ryanair, (2014) "IATA Confirms Ryanair is the World's Favourite Airline," Ryanair Official Website <a href="http://corporate.ryanair.com/news/news/140610-iata-confirms-ryanair-is-the-world-s-favourite-airline/?market=en">http://corporate.ryanair.com/news/news/140610-iata-confirms-ryanair-is-the-world-s-favourite-airline/?market=en</a>
- Sachdeva, J., (2009) "Business Research Methodology," Himalaya Publishing House: Mumbai, India
- Sandstrom, Gustav, (2013) "Meet Scandinavia's Answer to Richard Branson," Wall Street Journal, December 13, 2013
  - http://www.wsj.com/articles/SB10001424052702304173704579264302787072202
- SAS, (2014) "Annual Report with Sustainability Review: November 2013 October 2014," Scandinavian Airlines
- Saunders, M., Lewis, P., and A. Thornhill, (2012) "Research Methods for Business Students," Pearson Education Limited (Edinburgh, 6<sup>th</sup> ed)
- Sletten, A., (2009) "Kjos årets leder," *Nettavisen.no* http://www.nettavisen.no/na24/2754932.html
- Smyth, M., and B. Pearce, (2008) "Air Travel Demand," IATA Economics Briefing No. 9
- Sturesson, V., (2010) "Can the Low Cost Boom in Aviation Reach Long Distance Destinations,"
   University of Gävle (Master Thesis)
- Sumner, J., Bird, L., and H. Smith, (2009) "Carbon Taxes: A Review of Experience and Policy Design Considerations," *National Renewable Energy Laboratory: Technical Report (December 2009)*
- Tafur, J., Palacios, M., and A. Sismanidou, (2008) "Alternative Market Growth Options for European Low Cost Carriers," *International Conference on Industrial Engineering and Industrial Management*, (September 2-5, 2008)
- Taneja, Nawal, (2008a) "Flying Ahead of the Airplane," Ashgate: Aldershot
- Taneja, N., (2008b) "New Business Models to Make Airlines More Strategic and Agile," IATA Key Policy Issue
- Tarry, C., (2007) "Airline Merger and Acquisition (M&A) Activity: A New 'Super-Cycle' or 'Over-Exuberance'?" *IATA Analyst Viewpoint (April, 2007)*

- Taylor, I., (2008) "Fuel Costs Cripple Oasis," Travel Weekly (UK), 04/18/2008, p19
- Taylor, I., (2013) "The Economics: Norwegian Says 787 Makes Low-Cost US Flights Profitable,"
   Traven Weekly (UK), 24/10/2013, 2191
- Taylor, R., and M. Perry, (2011) "Ash Cloud Clears, Australia Flights Resume," Reuters, June 22, 2011
- Tretheway, M., (2008) "The Competition Effects of Airline Mergers and Alliances: The Role of Price Discrimination," *IATA Analyst Viewpoint (April 2008)*
- Tyler, T., (2013) "Annual Review 2013," IATA
- Tyler, T., (2014) "Annual Review 2014," *IATA*
- Van der Brugge, (2008) "Low-Cost Aiming for Long-Haul," University of Amsterdam (Master Thesis)
- Wall, R., and D. Cameron, (2014) "EU Seeks Meeting with U.S. over Norwegian Air," Wall Street Journal, 14/10/14
- Wensveen, J., (2007) "Wheels Up: Airline Business Plan Development," Krieger: Malabar, (2nd ed.)
- Wensveen, J., and R. Leick, (2009) "The Long-Haul Low-Cost Carrier: A Unique Business Model," *Journal of Air Transport Management*, 15, p127-133
- Which Airline, (2015) "Battle of the Low-Cost Airlines," Which Airline <a href="http://www.whichairline.com/news/Battle-of-the-low-cost-airlines%3A-Ryanair-AirAsia-ortigerair-None-of-them-in-2014">http://www.whichairline.com/news/Battle-of-the-low-cost-airlines%3A-Ryanair-AirAsia-ortigerair-None-of-them-in-2014</a>!
- Whyte, R., and G. Lohmann, (2015a) "Low-Cost Long-Haul Carriers: A Hypothetical Analysis of a 'Kangaroo Route", *Case Studies of Transport Policy*, (Article in Press)
- Whyte, R., and G. Lohmann, (2015b) "The Carrier-Within-A-Carrier Strategy: An Analysis of Jetstar,", *Journal of Air Transport Management*, 42, p141-148
- Wielgoss, T., Poretskiy, B., Sauvage, E., Weiss, M, Zarate, S., Grotepass, J., Escutia, P., and J. Orzechowski, (2013) "European Airlines: Meeting the Headwinds Head On," *A.T. Kearney*
- Williams, George, (2002) "Airline Competition: Deregulation's Mixed Legacy," Ashgate: Aldershot
- Wit, J., and J. Zuidberg, (2012) "The Growth Limits of the Low Cost Carrier Model," *Journal of Air Transport Management*, 21, p17-23
- Wojahn, O., (2012) "Explaining Over-Capacity in the Airline Industry," IATA
- Woodgate, Emily, (2014) "AirAsia to Take on Norwegian Air," News in English http://www.newsinenglish.no/2014/07/17/airasia-to-take-on-norwegian-air/
- Woodman, S., (2014) "NDC: Low Cost in for the Long Haul?" *Triometric* http://www.triometric.net/blog/item/ndc-low-cost-in-for-the-long-haul
- World Bank, (2015) "Data: Norway," The World Bank http://data.worldbank.org/country/norway
- Wu, S., (2012) "The 'Southwest Effect' Revisited: An Empirial Analysis of the Effects of Southwest Airlines and JetBlue Airways on Incumbent Airlines from 1993 to 2009," *Michigan Journal of Business*, 5(2), p11-40
- Yahoo, (2012) "AirAsiaX to Withdraw Flights to Europe, India," *Yahoo News* http://news.yahoo.com/airasia-x-withdraw-flights-europe-india-091645675.html
- Yin, R., (2014) "Case Study Research: Design and Methods," SAGE: Los Angeles, California (5<sup>th</sup> ed.)
- Zander, C., (2014a) "Norwegian Faces Claims over Dreamliners," Wall Street Journal, 20/08/14
- Zander, C., (2014b) "Norwegian Air Shuttle Pilots End Strike," Wall Street Journal, 10/03/14
- Zikmund, W., Babin, B., Carr, J., and M. Griffin, (2012) "Business Research Methods," *Cengage Learning*, (9<sup>th</sup> ed.)
- Zuidberg, J., (2014) "Identifying Airline Cost Economies: An Econometric Analysis of the Factors Affecting Aircraft Operating Costs," *Journal of Air Transport Management*, 40, p86-95